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Notes on an Architectural Competition for Remodeling of a Tenement Block

Held Under Auspices of Reconstruction Commission, State of New York, and Joint Legislative Committee on Housing

THE problem as set forth in the program was "the remodeling of a characteristic old tenement block in the City of New York so as to make it a decent place to live in. The object of the competition was two-fold: First, to find the best method of improving living conditions in the old law tenements without entirely destroying the buildings; second to find a plan of remodeling that will encourage such alterations by the demonstration of its economic wisdom. The relation of costs to results obtained was a predominating factor in determining the judgment.

For the purpose of this study the block bounded by Rutgers, Madison, Jefferson and Monroe Streets on the lower East side of the Borough of Manhattan was chosen. This block contains examples of various types of old tenements. There are on Rutgers Street old private houses, that have been converted into apartments. These have dark rooms in the center of the building. On Madison Street are examples of the so-called railroad type of apartment with no means of ventilation in the center of the building excepting from small shafts two to four feet in width. There are in certain cases a series of three to four rooms borrowing light one from the other with only the first having windows directly opening on the street or yard. On Jefferson and Monroe Streets are the later type of so-called dumbbell apartments. In these, the inner court, the greater part of which is no more than five feet in width, is entirely enclosed on all sides, so that fresh air, if it enters at all, must enter from the top.

SCENE IN A REAR ALLEY

Each competitor was supplied with complete plans of the ground floor and a characteristic floor and elevations of the street fronts of all the buildings of the block. They showed the present actual conditions. They were required to submit two plans showing similar floors after the proposed alterations had been made and a description.

The jury based its judgment on three considerations in the order given:

1. The improvement of living conditions.
2. Economy in cost of alteration.
3. The number of persons and families that could be decently housed.

In its consideration of decent living conditions, the jury accepted as primary factors:

1. Direct light and air in every room; the elimination as far as possible of shafts and closed in courts, receiving air only from the top and the concentration of space devoted to courts in large areas.
2. Proper sanitary facilities including a bath tub and individual toilets for each apartment.
3. Compact plan without wasteful corridors and with privacy in individual rooms.
4. Direct and easy access to apartments from well-lighted stairs conveniently located. The eliminations of useless and dark corridors. An important consideration was the means of reaching the stairs from the street.

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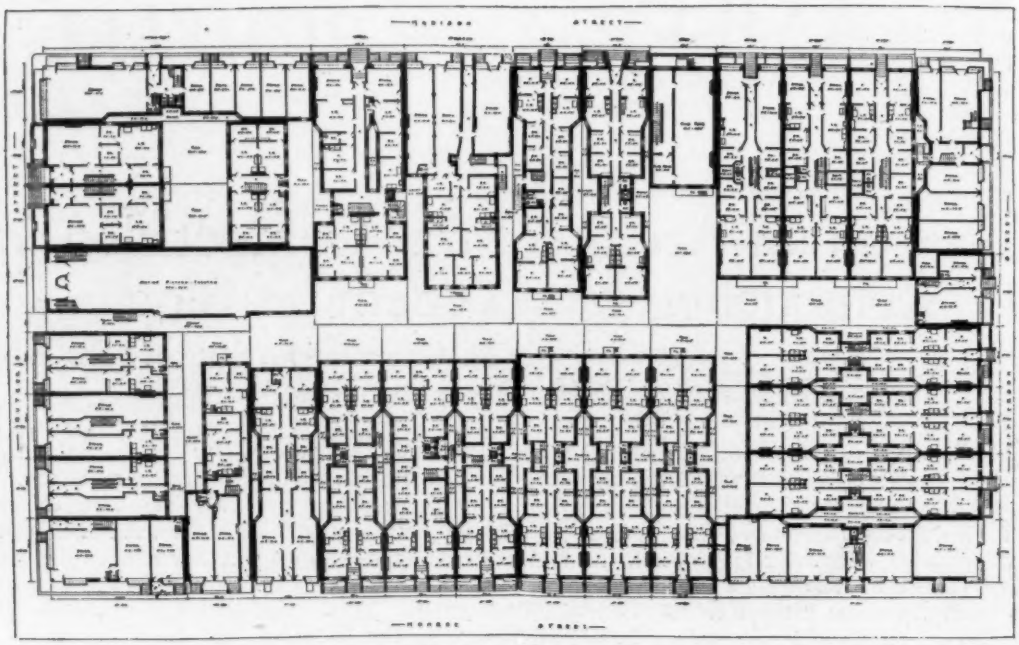
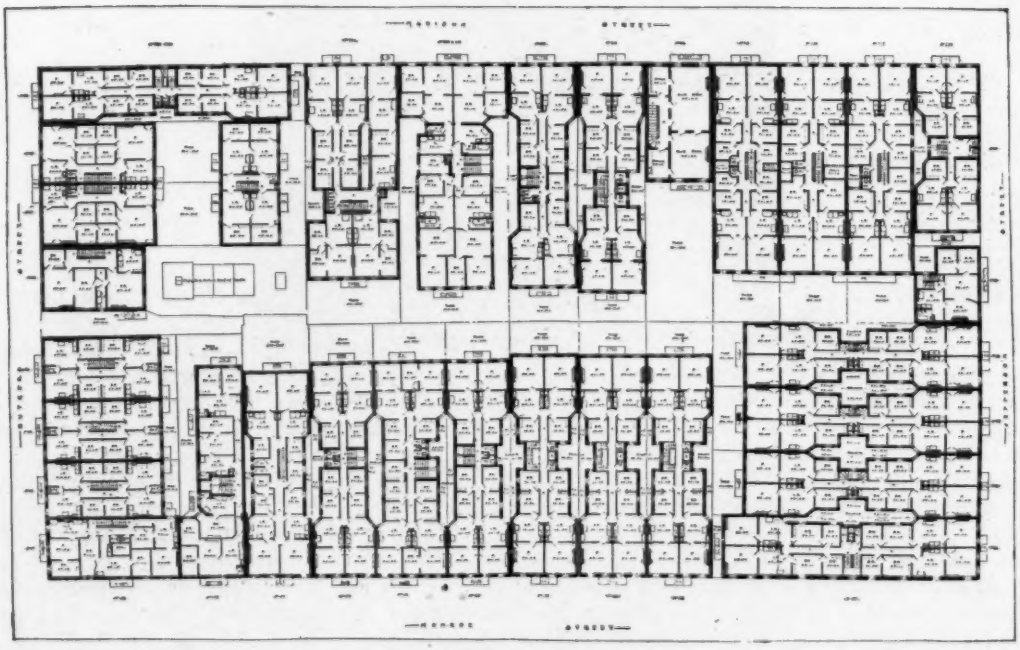
XUM



CHARACTERISTIC PLAN



GROUND FLOOR PLAN

Floor plans of block bounded by Rutgers, Madison, Jefferson and Monroe Streets, New York, furnished to competitors as basis for remodeling

5. Space for play and recreation, either in yards, courts or on roofs.
6. Laundry facilities and place for drying clothes.
7. Conveniences essential to modern living such as dumb-waiters, sinks, wash tubs, etc.

The second consideration was the cost of alteration. Many plans were submitted which had great merit as plans of new tenements but the expense of carrying out these plans would be equal if not greater than that of completely rebuilding the block.

The Jury was assisted by estimates on certain of the proposed schemes of alteration. These were

VIEW IN A COURT WHICH IS A CHILDREN'S PLAYGROUND

prepared by Myrich & Ward, Inc., and J. Odell Whitenack, two contractors who have had much practical experience in alterations of this type.

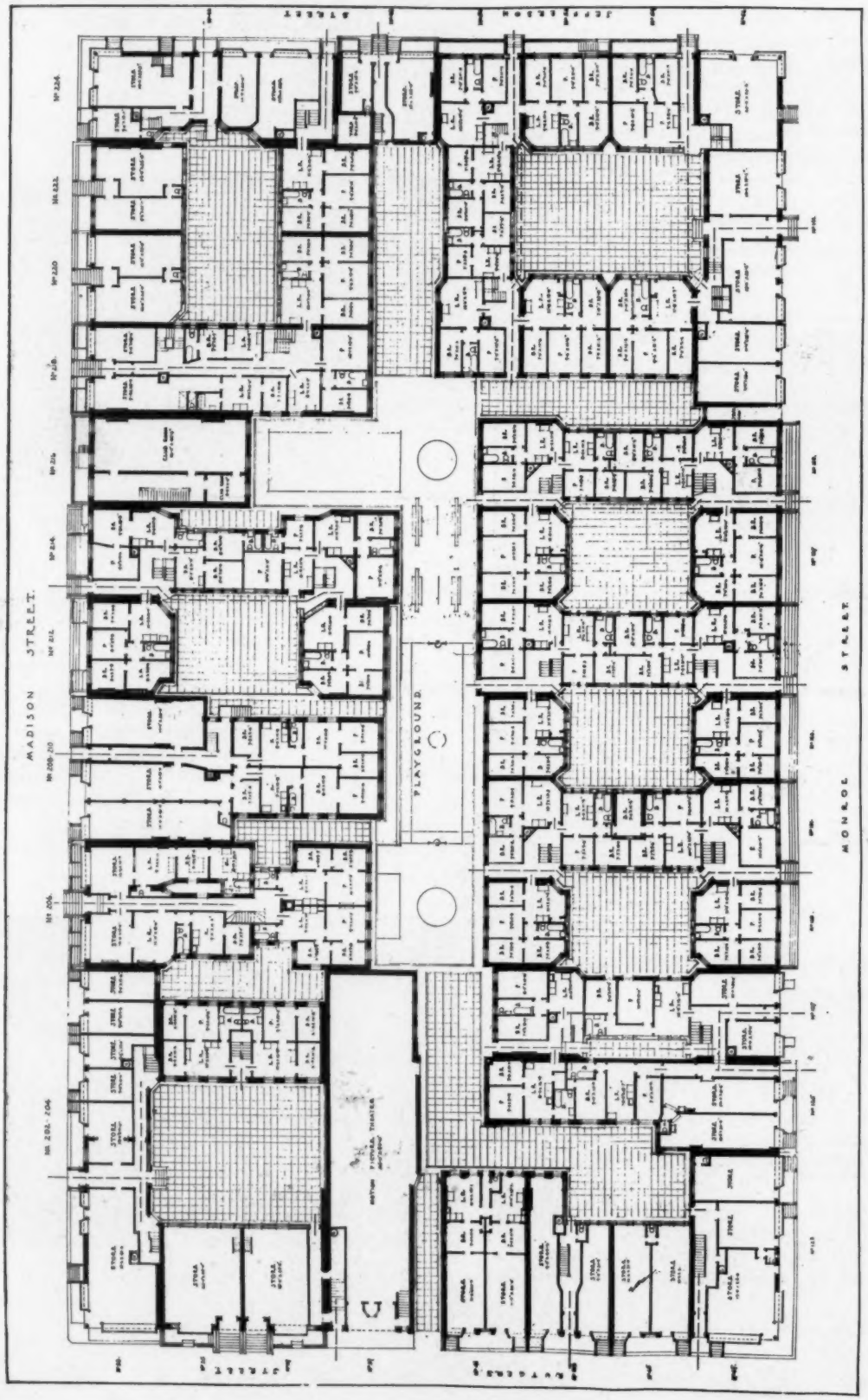
The economic wisdom of a solution as a business proposition must be based not only on the cost of the remodeling but also on the comparison of the present rentals with those that could be expected as a result of the changes proposed. The Jury's next consideration was therefore the number of families decently housed. In many of the schemes the number of rooms now existing has been but slightly decreased though every room has been given direct light and air on the street or on large courts or yards.

After due consideration of each proposed alteration on the basis of the two main points of good housing and practicability from an economic stand-

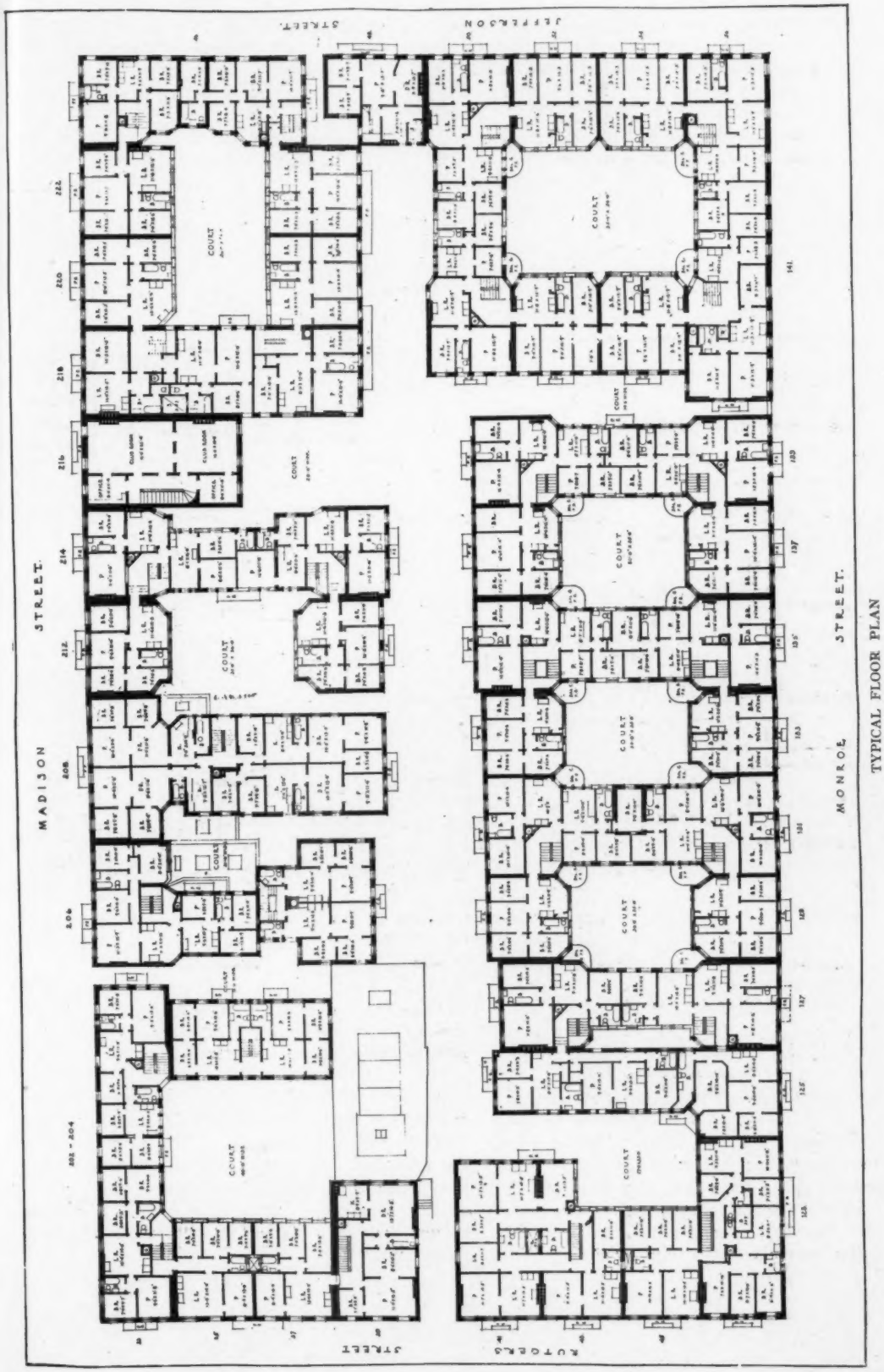
CHILDREN FLEEING APPROACH OF THE PHOTOGRAPHER. NOTE THE ACCUMULATED RUBBISH

point, the Jury concluded that although there were good solutions of each, no solution was found that combined both. The Jury felt that no complete solution was offered in any one plan that would give a combination of good housing and a low alteration cost. Though this is true of the block as a whole, it is very likely that experiments with parts of blocks will prove that there are practical means of approximating the suggestions offered in the plans submitted in this competition. Many of the plans suggest desirable alterations of groups of houses that appear

A TYPICAL "PLAYGROUND"



GROUND FLOOR PLAN
SIBLEY & FETHERSTON, *ARCHITECTS*
AWARDED FIRST PRIZE OF $1,000

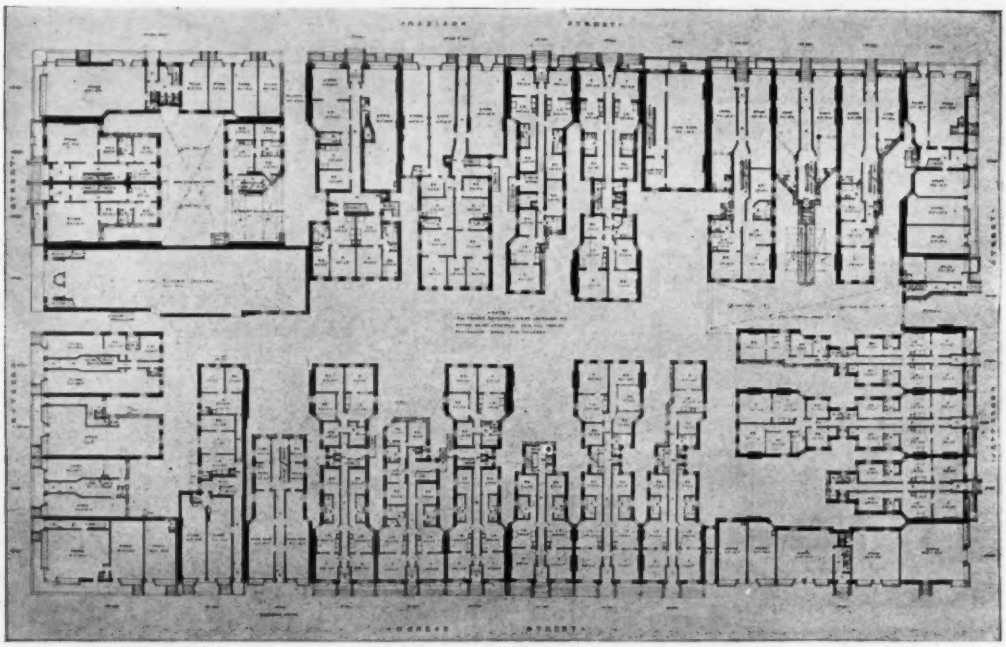


TYPICAL FLOOR PLAN
SIBLEY & FETHERSTON, *ARCHITECTS*
AWARDED FIRST PRIZE OF $1,000

to be simple enough so that they would pay as a purely commercial venture. However the Jury was able to choose no one solution offered as a combination both of entirely satisfactory housing and a reasonable cost.

The two plans to which the largest awards were made offered each a different phase of the solution. That of Messrs. Sibley & Fetherston illustrated the maximum of good housing without entire reconstruction of the buildings themselves. However, in economy of cost that of Robert Gilbert Ecob affords lower costs and therefore would make possible lower rentals on a commercial basis, although less desirable living conditions are produced.

The plans of Messrs. Sibley & Fetherston secure ample air and light for all apartments by destroying the central portion of certain of the buildings. In the case of the dumb-bell type, they do away with a portion of each second building so as to leave courts approximately 30 and 35 ft. wide instead of the former courts five feet wide. In place of the 1,587 rooms in the existing plan, they preserve 1,481 rooms. In other words, they closely approximate the number of existing rooms although they greatly decrease the area covered by the buildings. This they succeeded in doing by eliminating most of the space devoted in the present buildings to lengthy corridors. Stairways are arranged so that entrances from street halls to apartments is direct and apartments are arranged in such a way as to almost entirely eliminate private corridors. Most all the principal rooms are placed in such a manner as to have cross draft. Estimates for this series of plans were received, amounting to over $900,000. It is very probable that with slight changes the scheme could be simplified in such a manner as to cut down this price considerably, without loss of the essential features of the plan. It is proposed by the authors of this plan that courts be used as playgrounds and that roofs be used for the drying of clothes. The plan of Mr. Ecob is very much less ambitious but very much more economical. Instead of destroying large units of buildings, Mr. Ecob opens up the ends of the long courts so that air can enter freely from the ends of these courts. This would not give the most desirable type of light and ventilation but would be a vast improvement on the existing conditions. The cost of this alteration would probably be less than half that of the scheme of Sibley & Fetherston.



GROUND FLOOR PLAN
ROBERT GILBERT ECOB, *ARCHITECT*
AWARDED PRIZE OF $1,000

Various other prize winners show different schemes of altering by the destruction of the central portions of certain of the buildings in such a way as to open up large courts, which are used as playgrounds for the children or as small green parks. Many ingenious schemes of planning far superior to those in existing apartments of more expensive type were intelligently shown in these plans.

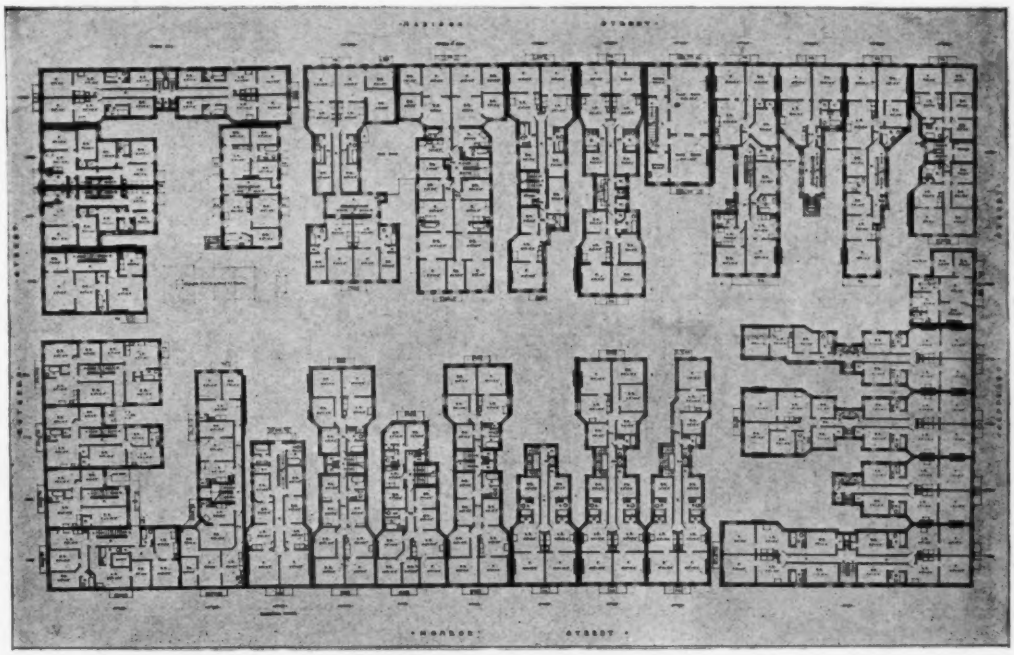
APPROACH TO UPPER COURT FROM MONROE STREET. NOTE THE BLOCKED FIRE PASSAGE

The manner of carrying out the proposed schemes was various. A number of the competitors suggested the formation of a company of the present tenants for the purpose of carrying on all the constructional work. Others favor the assistance of the State or municipal committees of commissions and the use of State credit for the purpose of carrying out the alterations.

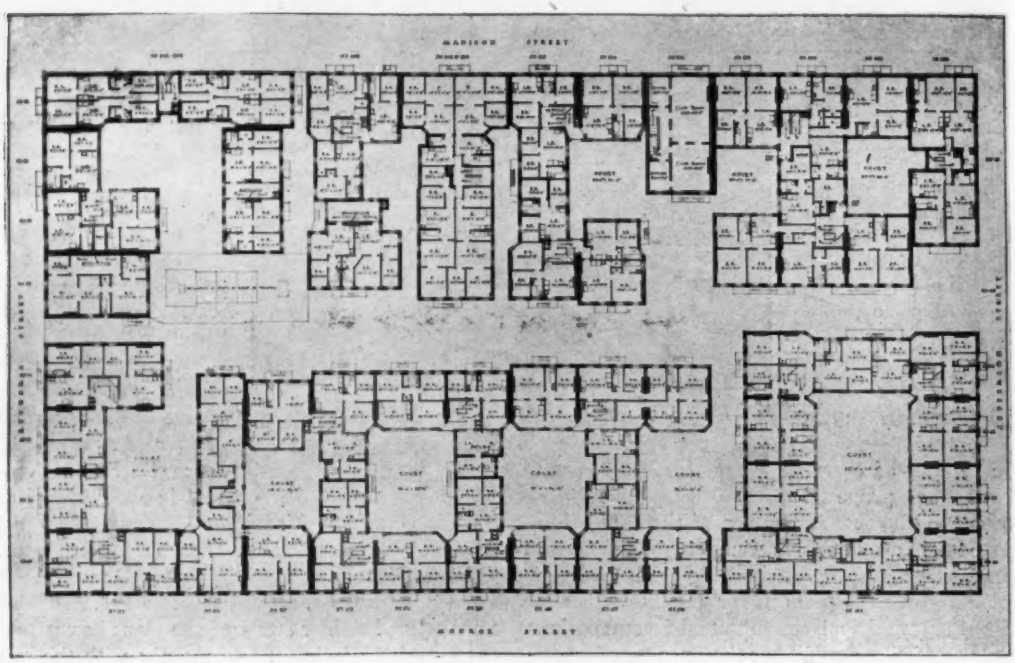
On the question of management most of the authors agreed in suggesting some form of co-operative management with a single heating plant and lighting plant and efficient management by a central office. It was pointed out by many of the competitors that both the construction and management could be carried out in a practical manner in small units.

Messrs. D. Everett Waid, Allan Robinson, Alfred E. Marling, Edgar A. Levy, Clarence S. Stein, Andrew J. Thomas, Burt Fenner, Robert D. Kohn, Alexander M. Bing, Hon. Frank Mann, Tenement House Commissioner; Senators Charles C. Lockwood and John J. Dunnigan; Mrs. Henry Moskowitz, and Miss Lillian D. Wald made up the Jury. Their study of the plans has continued for a period of almost two months with the results as herein set forth.

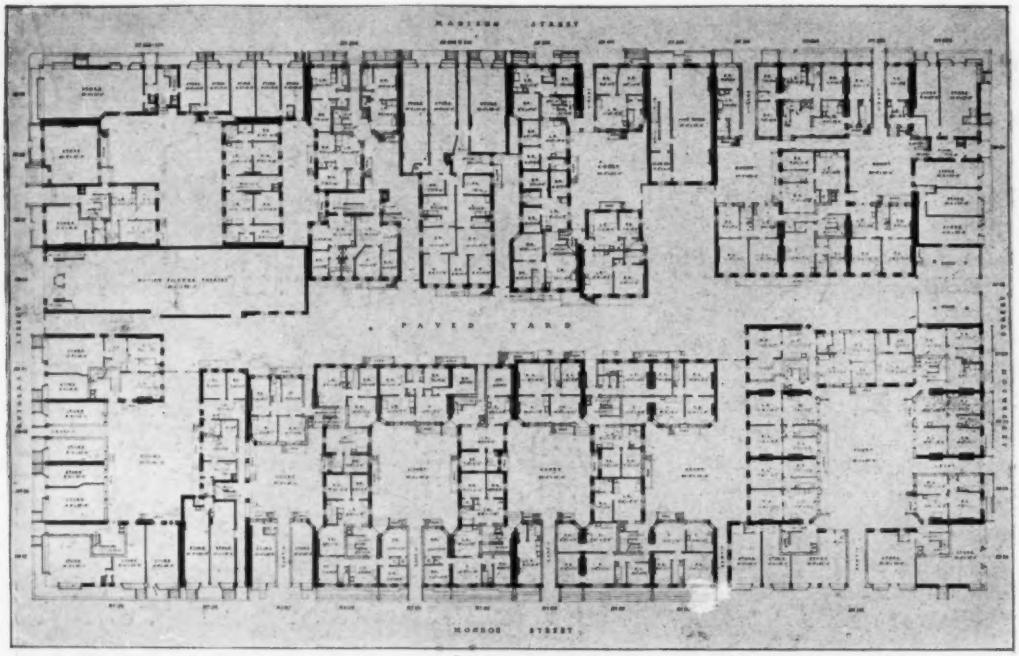
Basing its consideration on two main points,



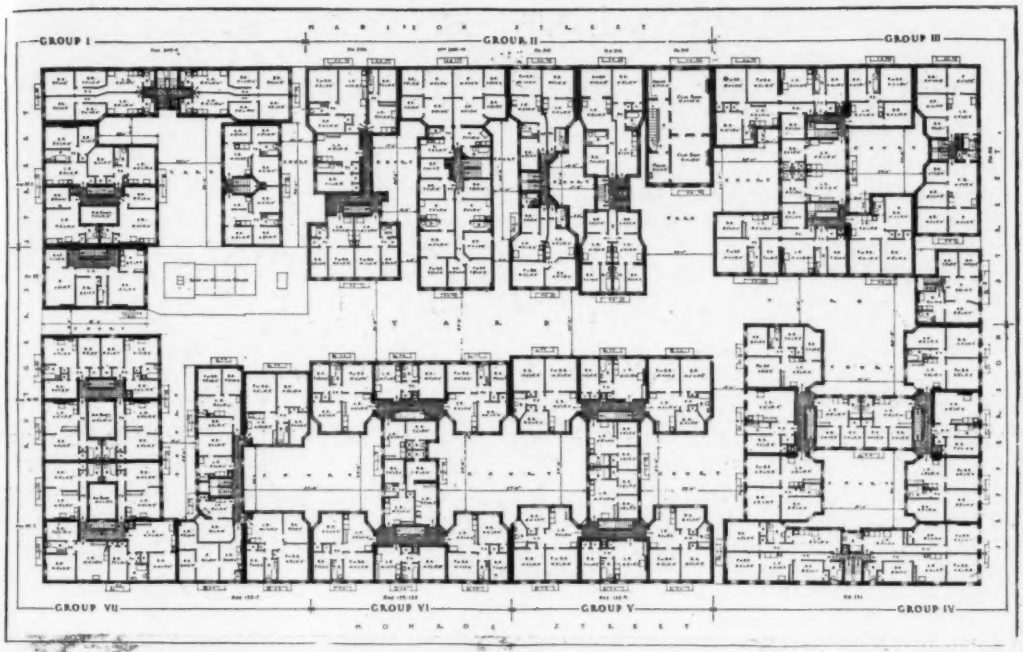
CHARACTERISTIC FLOOR PLAN
ROBERT GILBERT ECOB, *ARCHITECT*
AWARDED PRIZE OF $1,000



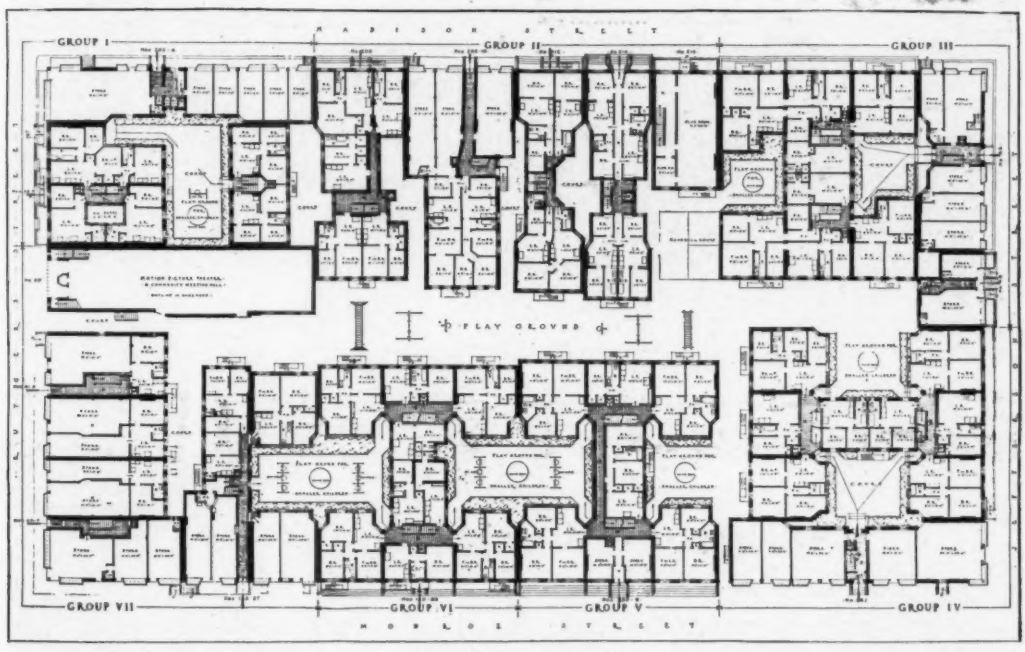
CHARACTERISTIC FLOOR PLAN



GROUND FLOOR PLAN
MURPHY & DANA, *ARCHITECTS*
AWARDED PRIZE OF $500



CHARACTERISTIC FLOOR PLAN



GROUND FLOOR PLAN
E. H. KLABER & E. F. WASHBURN, *ARCHITECTS*
AWARDED PRIZE OF $500

that of good housing and practicability from an economic standpoint, the Jury made the following awards:

Sibley & Fetherston	$1,000
Robert Gilbert Ecob	1,000
Murphy & Dana	500
Sibley & Fetherston	500
Eugene Henry Klaber and F. Washburn	500
Schenck & Mead	250
Ford Butler & Oliver	250

Addition to the Hotel Ambassador, Atlantic City, N. J.

MESSRS. WARREN & WETMORE, *Architects*

THE Hotel Ambassador at Atlantic City was opened to the public in the summer of 1919 as a link in the chain of hotels operated by the Ambassador Hotels System, extending from Los Angeles to New York.

Designed by Messrs. Warren & Wetmore, of New York City, it embodied the very latest achievements in the design, equipment and furnishing of the modern hotel at that time. Its 390 guests rooms, together with its lounging and dining rooms, made it one of the largest of the numerous hotels at this seaside resort.

LOGGIA—BRIGHTON AVENUE SIDE

The demand for hotel accommodations at Atlantic City became so great, due to the city's popularity as an all-year-round health and pleasure resort and its selection by many deliberative bodies for a convention city, that it exceeded the available supply. As a result of this demand an extension has been built to the Hotel Ambassador, which more than doubles its original size and extends it to the limits of the full city block bounded by Brighton avenue, the Boardwalk, Stanton place and Pacific avenue. The extension is 125 x 228 ft. and was designed by the architects for the original building.

Improvements in hotel design, developed since the construction of the original hotel, have been incorporated, making the new building even more complete than the original.

Like the older building, the addition is twelve stories high, finished in buff rough textured brick. It contains 450 guest rooms. It is joined to the old building on the first floor only. Above the first floor the extension is L-shaped and is separate and distinct from the original hotel. A colonnade loggia runs along the Brighton avenue and Pacific avenue sides. The first story is occupied by a large entrance foyer, European and American plan dining rooms and kitchens. The European or Renaissance dining room is designed to be used for large functions, as a ball room.

The dining rooms in the extension serve the entire hotel, the original dining room being utilized as a lounge.

Some novel features in foundation design and construction were developed in the construction of the extension. This subject will be treated in the Engineering Department of this journal in a succeeding issue.

Employers' Housing Project

IN an interesting interview in the New York *Times,* Mr. Wm. E. Harmon of the Housing Conference Committee described certain pros and cons of housing by employers. A common error is, he says, to build houses of a kind foreign to the make up of the indivdiuals who will either buy or rent them. The man in the machine shops and his wife do not, for instance, want their walls papered in tans and grays. They want gayly-colored flowers. The architect that the employer retains cannot conceive of lending himself to a housing scheme where every law of art and decoration is defied.

He fails to recognize the fact that, even as his sense of artistic conventions is being shocked, he is overturning the sense of color and beauty which these people have made their own. It is true that his ideal of beauty may be the truer one as far as consensus of artists is concerned, but it is the foolhardy man who attempts to superimpose ideas of any sort upon a group of people before the groundwork to support them has been dug.

Mr. Harmon suggests that employers contemplating a housing project should first have a committee on which the employes have a commanding vote to assure the characteristics they deem necessary.

This done, the next step is to hire a builder, not an architect, who can give the employe the kind of house he wants. For this special problem Mr. Harmon thinks the insignificant builder on the street is more valuable than the exclusive architect with offices in an expensive building. The first knows the people whose houses he is building; his tastes are their tastes, his needs are their needs, his ideas and ideals of beauty are theirs.

"If I were building an industrial housing centre for employes who were of Irish extraction," he says, "I should choose a builder of Irish extraction or one who was familiar with their domestic idiosyncrasies; if I were building a centre for Italians, I should attempt to get a man of their own nationality to plan the details of the houses; if I were building homes for Jewish men, it would be the Jewish builder with whom I would confer. What the employer is primarily interested in is the happiness of his employes, which, in turn, insures him the prosperity of his business. He must learn to put himself in their place. He must understand that green wallpaper with pink flowers is all right even if it is an eyesore to him. He must appreciate the truth that, in planning for things outside of the factory for his employes, the less authority he exerts the less mistakes he will make in matters of which he has no knowledge. Once he understands that, the matter of perpetuating their stay with him will take care of itself.' '

XUM

Architectural Quicksands

Changes in Plans

By CLINTON H. BLAKE, JR.

PROBABLY the phases of the architect's work which proves in many ways most exasperating is the making of the many changes in the sketches and plans demanded by the client. It is natural that the first sketches and floor plans submitted should not absolutely meet the ideas and approval of the client. The architect knows only too well how many suggestions for changes the ordinary client will make and what a large proportion of them will probably be entirely impractical and impossible of adoption. Usually these very ones are those upon which the client has particularly set his heart, and it takes a considerable degree of both patience and tact on the part of the architect to convince him that they should not be forthwith incorporated in the plans. For some reason, the ordinary client is not able to "read" a plan or visualize an interior from the plan with any degree of accuracy. The inevitable result is that in almost every case, after sketches and plans have been prepared and tentatively agreed upon, the client will direct that certain changes in elevation and lay-out be made. As a result, the plans must be redrafted and specifications changed. Clients, even those who are trained business men, seem to realize very little of the amount of time and labor, and expense—as well—which enter into the preparation of sketches and plans. They realize even less the real expense in the time of the architect and his draftsmen and organization which the making of changes in the plans and specifications entails.

The architect, in the absence of any agreement on the point, is entitled to recover the reasonable value of the services and time given. Nevertheless, as a practical matter, unless the point has been specifically covered and unless the client understands fully the basis on which the work is done, it will be found that he will object strenuously to any substantial charge for changes and alterations, and that the fact that the changes and alterations are due to his own desires and directions will not alter his feelings in this respect. To prevent complications with respect to alterations it is essential that the architect should, in the first place, be sure that under the agreement with the client he has not obligated himself in any way to make changes without additional charge, and in the second place, see that some affirmative agreement on the part of the client is entered into, whereby the architect is insured payment for the extra work done.

Recently I was consulted on a case coming under the first of these possibilities. The client had written a letter to the architect at the beginning of their relationship, outlining in a general way his understanding of the terms upon which the work was to be done. The letter was received by a subordinate in the architect's office and accepted by him without the knowledge of the architect. The job in question involved the erection of an elaborate country home. From the beginning, the client required repeated changes in the elevation, and in the plans and specifications, as well, with the result that, by the time the work was completed, the architect had given to the job about three times the time and attention which would have been required had the work been proceeded with along the lines of the plans and specifications, as originally drawn and prepared. When the architect submitted his bill for the additional time which he had given to the changes the client produced the letter which he had written and which the office of the architect had acknowledged and accepted and claimed that under the wording of the letter the architect could make no charge for any of the changes and the extra work represented by it.

When the highly indignant architect submitted the facts to me, I was forced to advise him that, in view of the letter which had been written and the acceptance of it by the architect's office, the client was within his legal rights in taking the position which he did, however unethical and morally indefensible that position might be. If the letter from the client had been properly considered and its legal effect appreciated, the architect could, in the beginning, have told the client that he would not proceed on the basis outlined and could undoubtedly at that time have secured the assent of the client to stipulation that the architect should be paid for any changes asked for by the client. The architect has needed no second lesson, and ever since the foregoing occurrnce has made it a rule in his office to secure a definite contract, the provisions and effect of which he fully understands, and to embody in this contract, as one of its terms, the provision that he shall be paid the reasonable value of all work made necessary by changes in sketches, plans or specifications required by the client.

It is self-evident that a provision of this sort is entirely proper. Of course, any changes which the architect may be required to make to correct inac-

curacies in his preliminary work cannot properly be the subject of a charge. Where the client himself insists on changes, however, and thus is the direct cause of the extra work done, it is both just and proper that he should pay for the work, and no client, if the matter be properly broached in the beginning, can well refuse to agree to such a condition. On this point, as on all the other points covered by the contract between architect and client, the many terms which will be readily agreed to at the first interview or before the work has actually gotten under way, may, as the job develops, be exceedingly difficult to arrange. One cannot look ahead sufficiently to anticipate what complications may arise, what the mental re-actions of the client may be, or how the attitude and feeling with which he at first undertook the work may be affected by unexpected increases in cost, changes in his own financial situation, possible friction between the architect and himself, or by any one of a score of like possible causes.

The philosophy of "doitfust," so pleasantly set forth by David Harum, applies to the dealings of the architect with his client, just as emphatically and pertinently as it does to any other business dealings. Get your agreement clear in the first place and do not trust to everything working out without complications or to fortune favoring you in case complications do arise!

Special Work.

A phase of the ordinary high-class job, which is analagous to the extra work proposition, is that having to do with work of a special and extraordinary character. The architect's commission is based on the assumption that the job is to be of the ordinary kind and that no special work, requiring an unusual degree of care in design or execution, is to be incorporated in it. In repeated cases, however, this is exactly what is done, and in any very high-class and extensive piece of construction, especially in the cases of country homes, special work will be called for in the design and installation of panelling, cabinet work, *torcheres* or other similar items. This work requires, naturally, a special degree of thought and a special degree of skill, and it is fair that the architect should be paid on a higher percentage basis for items of this character than for the ordinary design and construction. I have in mind, among other two rather interesting examples of how the architect may, unless he take proper precautions, suffer loss in this way. Each of these cases had to do with a country home, costing a large amount of money, and recognized as an extraordinarily effective and high-class piece of work.

In the one case the item on which the controversy arose was a specially designed door and doorway. The client desired a very particular and unusual effect, and the architect, at the expense of a great deal of time and personal study and attention on his part, had worked out and incorporated in the plans a design of unusual attractiveness and excellence. After the architect's work had been done, the client, for some reason, decided that he would not pay more than the ordinary commission for this special work, and the architect, as matters stood between them, was unable to force him to do so. The architect's office had been foolish enough, in this case also, to allow correspondence to stand on the record, which precluded any extra charge for the work done.

The second example which I have in mind arose in the course of the construction of the home of a man widely known and of high standing in his community. When the work was under discussion in the first place, the client, calling at the architect's office and noticing a rather choice old Chippendale cabinet, stated to the architect that he would like to have the woodwork in his house finished in a similar manner. What he had in mind and what the architect naturally understood was that he wanted to have the wood-work made to appear as nearly as possible similar to the antique. The architect did remember the client's request and gave special attention to the wood-work and achieved what he considered an unusually successful result in the finish. The client, after a critical inspection, decided that the new woodwork was not entirely comparable with the hand work of Chippendale, and, absurd as it may seem, insisted that the architect had not fulfilled his agreement and that he was entitled to exactly the same tone and the same "patina" on the woodwork in his house as that which the mellowing of age had given to the original piece. The result was that the client sincerely, but absolutely without cause, conceived a violent prejudice against the architect and refused to make payment of the many thousands of dollars which were still due the latter.

It was at this stage of the proceedings that I was brought into the matter. I spent many days listening first to the curses of the architect directed against the client, and then to the curses of the client directed against the architect, and finally was able to induce the client to make payment of the amount in full. This was not accomplished, however, until the architect, as a result of the misunderstanding, had lost a perfectly good and valuable client, and until he himself had given, and I had given, to the matter, attention and time representing a considerable amount of money. All of the difficulty in these cases might have been avoided quite easily, and the good-will of the client retained, if the architect had had a contract with the client properly drawn and executed, and had been more definite in his conversation and dealings with him. The case of the doorway and similar

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cases emphasize anew, also, the importance of developing a system of open organization and conduct which shall avoid as nearly as may be, the danger of some employee innocently committing the firm, by letter or otherwise, on points of importance, involving loss to the architect and calculated to breed misunderstanding and ill feeling between the latter and his client.

Delivery and Acceptance of Plans.

In any discussion relative to the right of the architect to recover for plans which he has prepared it must be understood that, to enable him to recover, he must have made a proper delivery of the plans to the owner. Of course, if the owner waives such a delivery, or by some action on his own part, prevents the delivery and makes it impossible, this rule would not bar the architect from recovering the amount due him. Unless, however, the owner waives or prevents delivery, or unless there be some contract between the owner and the architect, under the terms of which delivery need not be made, the plans must be delivered by the architect to the owner, in order to enable the former to recover for their preparation. The phrase "delivery to the owner" is used in a relatively broad sense, and if the owner directs that they be delivered to someone else, as, for instance, to his contractor, the delivery of them, in accordance with this direction, would be considered as a delivery to him.

The main point to remember, however, is that the mere preparation of the plans in the office of the architect is not sufficient. The point is important, because it often happens, that, after the plans have been prepared, the architect, either has some dispute with the client or perhaps becomes doubtful of the client's financial stability, and conceives the idea that he will demand payment for the plans, before delivering them. This is putting the cart before the horse, and might result seriously for the architect, in that the client could well refuse to make payment for the plans, on the ground that they had not been delivered and that payment had been demanded before delivery, and might even conceivably claim a definite breach of the whole agreement on the part of the architect, and so terminate the contract and relation between them, if the architect were to persist in his attitude.

In Massachusetts some years ago an owner tried to avoid liability by claiming that the plans had never been delivered to him. He had directed the architect to prepare the plans, and the architect had prepared a preliminary sketch. This he delivered to the owner, who kept it for some days, and after expressing his approval of the tentative scheme, as outlined, told the architect to proceed with the plans. He then had his builder call on the architect and take the completed plans and submit an estimate, based upon them. While the owner, in person, never received the plans, the Court quite properly decided that a proper delivery of them had been made and that the owner could not, under such circumstances, successfully claim non-delivery.

I have, in other writings, drawn attention to the distinction between the delivery and the acceptance of the plans, and a word or two more here on this point may, perhaps, not be amiss. The layman might ordinarily confuse delivery with acceptance. In fact, they are quite distinct. The architect may deliver the plans and the same may be received by the owner, and yet the latter may not necessarily accept them. If the architect has lived up to his obligations and agreement and on the work which he was employed to do, the owner, after the plans have been delivered to him, can not avoid his liability to pay for them by an arbitrary refusal to accept them, or by that claim that, because he does not accept them, they can not be considered as having been legally delivered. The architect, in such a case, can proceed with a clear conscience to collect the amount due him, and the Court will back him up and will not allow the owner to hide behind any such flimsy technicality. On the other hand, there are cases, not infrequently, where the distinction between delivery and acceptance becomes of prime importance, and where a failure to accept may well prevent the collection by the architect of the fee upon which he has counted. A typical case of this sort is that of the ordinary competition, where plans are prepared and delivered, with the understanding that the architect who has prepared the successful plans is to be chosen. In such a case, acceptance of the plans is necessary to enable the architect to recover for their preparation, except insofar as the competition may provide for some specific remuneration to unsuccessful contestants.

Beaux-Arts Institute of Design

DIRECTOR OF THE INSTITUTE, LLOYD WARREN

ARCHITECTURE, WILLIAM F. LAMB — SCULPTURE, JOHN GREGORY

MURAL PAINTING, ERNEST C. PEIXOTTO — INTERIOR DECORATION, ERNEST F. TYLER

Official Notification of Awards—Judgment of April 13, 1920

PROGRAM.

THE MUNICIPAL ART SOCIETY PRIZE.

Through the generosity of the Municipal Art Society of New York City this prize will be awarded annually on the fourth Class "A" Projet of the season.

First Prize—$50.00 Second Prize—$25.00

CLASS "A"—IV PROJET.

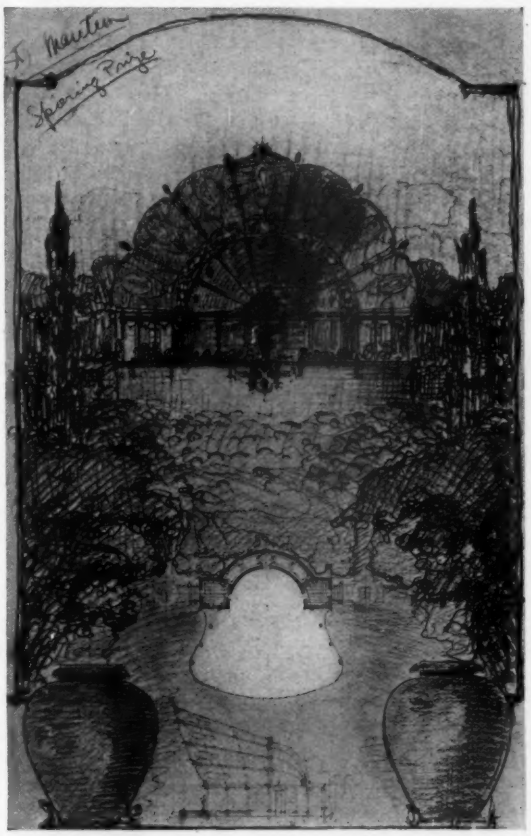
The Committee on Architecture proposes as subject of this Competition:

"A RAILROAD STATION PLAZA."

Modern engineering and the development of the electric locomotive have made it possible, by means of underground tracks, to establish our railroad stations at convenient points in our cities without fear of the noise and dirt which have heretofore made them so objectionable. We are now enabled to give the proper architectural treatment to this very important type of edifice and in many cases, notably in Washington, a large plaza has been developed in front of it which forms, in a sense, a gateway to the city and gives a very imposing impression to those arriving in the city.

The regulation and distribution of traffic, both pedestrian and vehicular, should be recognized as of the greatest importance. This is true not only of the immediate vicinity of the station, where the greatest congestion is likely to occur, but also of the various points about the plaza where the boulevards and streets enter. It is desirable to avoid as far as possible conflicting currents of circulation and to arrange the automobile and baggage entrances and exits

(*Continued on page 325*)

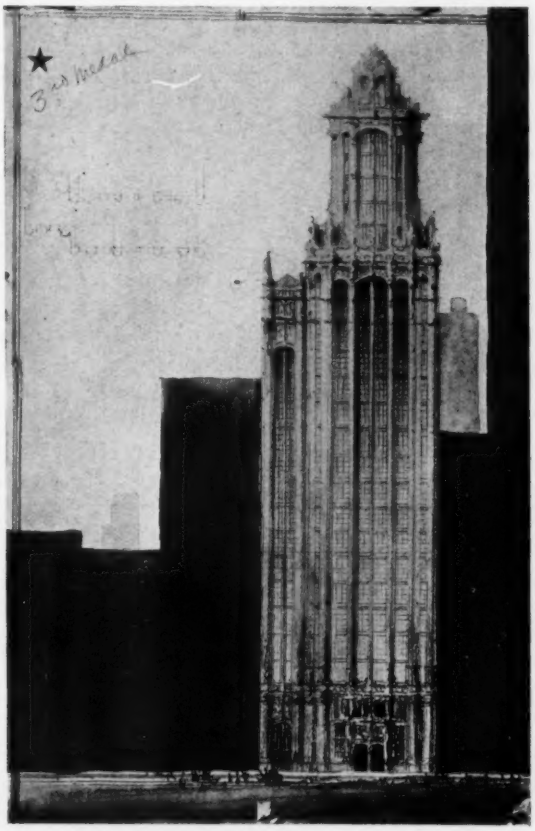


G. N. PAULY — CARNEGIE INST. OF TECH.

PRIZE AND FIRST MENTION

SPIERLING PRIZE COMPETITION

CLASS "B"—IV ESQUISSE-ESQUISSE—A BAND STAND



T. B. EPPS. — THIRD MEDAL — UNIV. OF PENNA.

CLASS "A"—IV ESQUISSE-ESQUISSE—THE FAÇADE OF AN OFFICE BUILDING

Looking Along the Southern Facade of the City Hall in New York

JOHN MACCOMB, *Architect.*

(See reproduction of the original drawing by O. R. Eggers in this issue)

CONCEDEDLY one of the best extant examples of early architecture in America, the City Hall in New York maintains in spite of towering neighbors the distinction that has ever rightfully belonged to it. When John MacComb set about the design and erection of the City Hall he perfected a set of drawings that were then, and remain today, examples of the most excellent artistic skill. Slowly this building grew to its present proportions until finally in 1804 it was completed.

It is significant of the honesty and integrity of those days, that the Council of the City, strong in the belief that the area north of the City Hall would not become important and desiring to rid the taxpayers of an unnecessary burden, decided to make the northern facade of brownstown as a means of economy. This splendid building fortunately has been able to withstand the misdirected efforts of city governments. Many so-called improvements have been carried forward under different administrations.

About twelve years ago there was accidentally discovered in an old chest in the rooms of the Historical Society, all of MacComb's original drawings. With these invaluable guides and due to the generosity of Mrs. Russell Sage and the city administration's concerted action, Mr. Grosvenor Atterbury has been enabled to restore the interior to its original condition. The Mayor's office, the Governor's room and the Council Chamber may now be viewed in almost exactly the same architectural state that marked the original interiors.

The exterior is practically unchanged with perhaps the exception of the cupola. This feature has been twice destroyed by fire. As at present restored by Mr. Atterbury, it is entirely fire-resisting and in design follows exactly along the major lines as shown in a series of tentative sketches made by MacComb

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A Seventeenth Century New England Farm House

ONE of the best preserved houses of the earlier Colonial Period in New England is the "Parson Capen House" in Topsfield, Mass., built in 1683 by the Rev. Joseph Capen and described in the latest bulletin of the Society for the Preservation of New England Antiquities. The house is now owned by the local historical society and was carefully restored in 1913 by its secretary. This house was well built, even for its day, and it possesses architectural embellishments unknown in other existing dwellings of that period. The second story widely overhangs the first in front, the garret floor project at either end and all are supported by ornamental wooden brackets. The overhang is a form of timber construction common in old English work and seems to have been done solely for its architectural effect. Beside the front door and under the gables are brackets that help to support the overhang.

The framework of these houses was usually of oak, though sometimes of pine and made of heavy timbers mortised and tenoned together and held in place by wooden pins. Their joints were hewn with much skill by men who worked as their medieval forefathers had done. The foundation timbers rested on an underpinning of field stones, laid without mortar.

The timbers of the framing in the Parson Capen house are, of course, very old, and the original newel and turned balusters of oak are still in place. Much of the interior woodwork, however, and all of the shingles and clapboards are restored. This restoration serves to show how the houses of the early period looked when fresh from the hands of the builders. Under the northern ends of the "summer beams"—which is one of the curious features in the Parson Capen House—being girts spanning the rooms, is incised with a chiel the date, July ye 8th, 1683, so that the exact date when the "frame" was raised is known.

THE CITY HALL, NEW YORK

THE AMERICAN ARCHITECT Series of Early American Architecture

EDITORIAL

Planning in Slum Areas

EVERY large city in the United States faces the problem of replacing its old tenement districts with decent living places. Two methods are available, one razing the entire area and replacing the demolished buildings with new ones; another is so to alter and improve the existing buildings as to make them fit places to live in. Up to the time of the decision of a competition just decided in New York but little if any serious attention was given by architects to the second of these alternative methods.

The interesting competition illustrated in this issue is the first important step in a movement to reform New York's slum district. The practical value of a movement of this nature cannot be questioned.

In March, 1919, of the total 982,926 individual apartments in New York City, 587,851 were in old law tenements, that is to say they were erected before the present Tenement House Law went into effect nineteen years ago. This law fixed standards which were designed to protect the community from the most obvious dangers of fire and disease. Most of the old law tenements still fall below these standards.

The old law houses, which are detrimental to the health and well being of the community and at the same time a poor financial investment might be expected to disappear and be replaced by other buildings. The process of destruction is slow. In ten years, that is to say, between February, 1909, and March, 1919, 58,552 apartments were destroyed. At this rate, it would take 100 years for the last of these buildings to disappear.

Most of the owners of the old houses have had slight if any return from the money invested. Rentals are low. The tenants constantly move. In twenty-five old tenement house blocks in various parts of the city surveyed by the Reconstruction Commission it was found that over 20 per cent. of the inhabitants move each year. There is always a large number of vacant apartments. In March, 1916, 6½ per cent. of the old law houses were unoccupied. In March last, at the height of the housing shortage, there were 19,110 old law apartments vacant. These were, with few exceptions, places unfit for human habitation.

Most of the defects of the old tenements are due to poor planning. Their value not only in terms of better living conditions, but also as a financial investment, would be enhanced if they were properly planned. They are below the standard fixed two decades ago. Since then great progress has been made in the planning of apartments. It has been proven within the last few years that with a use of double the amount of area required by the law for court space, apartments can be planned on the same sized lots so as to give the same rental per room, a greater return on the investment. These results have been attained by careful planning of large units.

ALL those modern features of good planning so clearly shown in the series of premiated plans presented herewith, are the result of a movement, largely given impetus by architects in this country. This very important work reached its culmination when a group of highly trained members of the profession labored in Washington throughout the war to bring to the highest state of efficiency these all-important features of low-cost housing. The value of the researches conducted by the various housing boards cannot be overestimated. The one big regret is, that owing to a shortsighted governmental policy, the various reports are not available. An edition, ridiculously short, was exhausted over night and thousands of men to whom this report would have been of very great value must do without it. Meanwhile the government printing office is largely aiding in increasing an already serious shortage of print paper in the widespread circulation of a lot of speeches delivered in Congress, whose only value is to those members who seek to repair their crumbling "fences."

It is to give the most widespread publicity to a subject that is vital to every large city in the country that THE AMERICAN ARCHITECT has devoted the greater part of this issue to a study in practical planning in slum areas, and it is believed that the game is very much worth the candle.

XUM

Advertising the Architect

THE one time advertisement of the nude baby, reaching for a cake of soap, always accompanied by the legend "He won't be happy until he gets it," reminds one of the struggles of a certain group in the architectural profession.

This group, by its insistence for a revision of that part of the Code that forbade architects to advertise, caused ultra-conservative members of the institute to cry out in protest. However, the barriers were in part eventually let down, and architects were free to advertise. With the exception of a certain few firms, some of whose advertising methods were explained and set forth in this journal, architects who were not going to be happy until they got permission to advertise have simply contented themselves with the permission and have made very limited use of the privilege.

It would appear, however, that the true value of advertising by architects does not lie in the effort of the individual as much as it does in organized bodies of the profession. The true intent of advertising is first of all publicity, and then the wide dissemination of fact. It is undoubtedly true that the general public has a less correct comprehension as to just what are the exact functions of an architect than of any other profession. It is an old and trite saying that a man who is his own lawyer has a fool for a client. No sensible man would endeavor to supply the doctor's place in his own family. There are, as all architects know, thousands of wiseacres who dispense with an architect's services and endeavor to serve their own ends by the exercise of their own uninstructed efforts. Advertising is the exact remedy. Campaigns of publicity, statements of facts and figures. Individuals have done this to a limited extent, but it will be much more effectively carried forward if under the control of state societies or chapters. These could speak with authority and the general public would at once detect the value of such a propaganda.

WE learn from the August Bulletin of the Illinois State Society that the Ontario Association of Architects, with a membership of 150, is, through the medium of a series of well prepared advertisements appearing in the Canadian daily press, educating the public into the exact meaning and importance that attaches to the title "Registered Architect." All the requirements that an architect must meet to become a registered architect are set forth and fully described in these advertisements. The result is that the public first becomes impressed with the fact that to become legally qualified to practice architecture, a man must learn a great many obstruse things well, but they are also awakened to the fact that there may be "quackery" among architects as well as among doctors, and that it will be to their interest to be on guard against it.

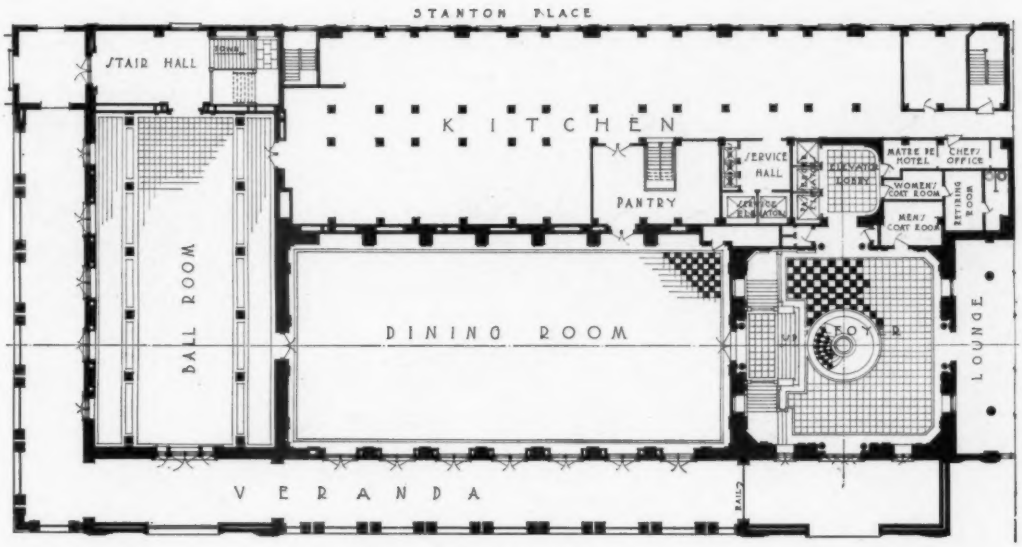
It is also learned from the bulletin's comment on the action of the Canadian architects that the campaign of advertising is producing the most valuable results to the entire accredited profession.

Architects in this country have, it is feared, chased the shadows and played with the straws of things. It is possible that in searching for a basis of philosophy they have ignored a basis of practicability. It is assumed that organized bodies in the profession are created to serve the best interests of its members. The Committee on Public Information that would logically be the one to carry forward a campaign such as is successfully operated in Canada is now practically defunct. It was, considered on the basis of its organization, a most valuable factor in placing a knowledge of the architect's services intelligibly before all the people.

Why not advertise the profession more energetically, and while placing a manufactured product before a consuming public, why not educate the students so that the products will be up to the specifications set forth in the advertisement?

ORIGINAL BUILDING AND ADDITION
THE HOTEL AMBASSADOR, ATLANTIC CITY, N. J.
MESSRS. WARREN & WETMORE, *ARCHITECTS*

TYPICAL FLOOR PLAN



FIRST FLOOR PLAN

ADDITION TO THE HOTEL AMBASSADOR, ATLANTIC CITY, N. J.

MESSRS. WARREN & WETMORE, *ARCHITECTS*

XUM

MAIN FOYER

ADDITION TO THE HOTEL AMBASSADOR, ATLANTIC CITY, N. J.

MESSRS. WARREN & WETMORE, *ARCHITECTS*

GROUND FLOOR ENTRANCE FOYER

ADDITION TO THE HOTEL AMBASSADOR, ATLANTIC CITY, N. J.

MESSRS. WARREN & WETMORE, *ARCHITECTS*

XUM

THE LOUNGE

ADDITION TO THE HOTEL AMBASSADOR, ATLANTIC CITY, N. J.

MESSRS. WARREN & WETMORE, *ARCHITECTS*

XUM

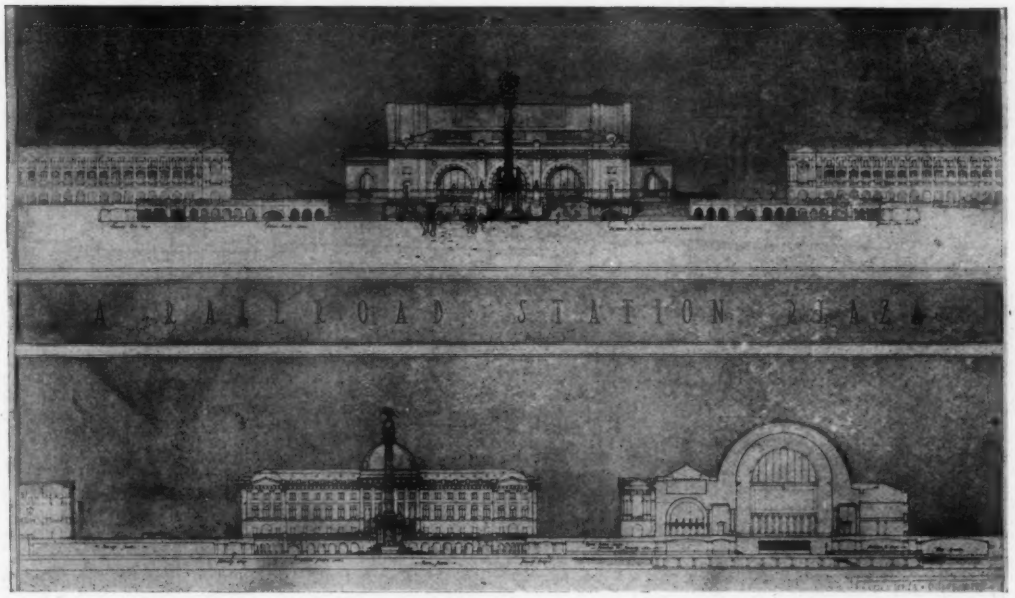
RENAISSANCE DINING ROOM

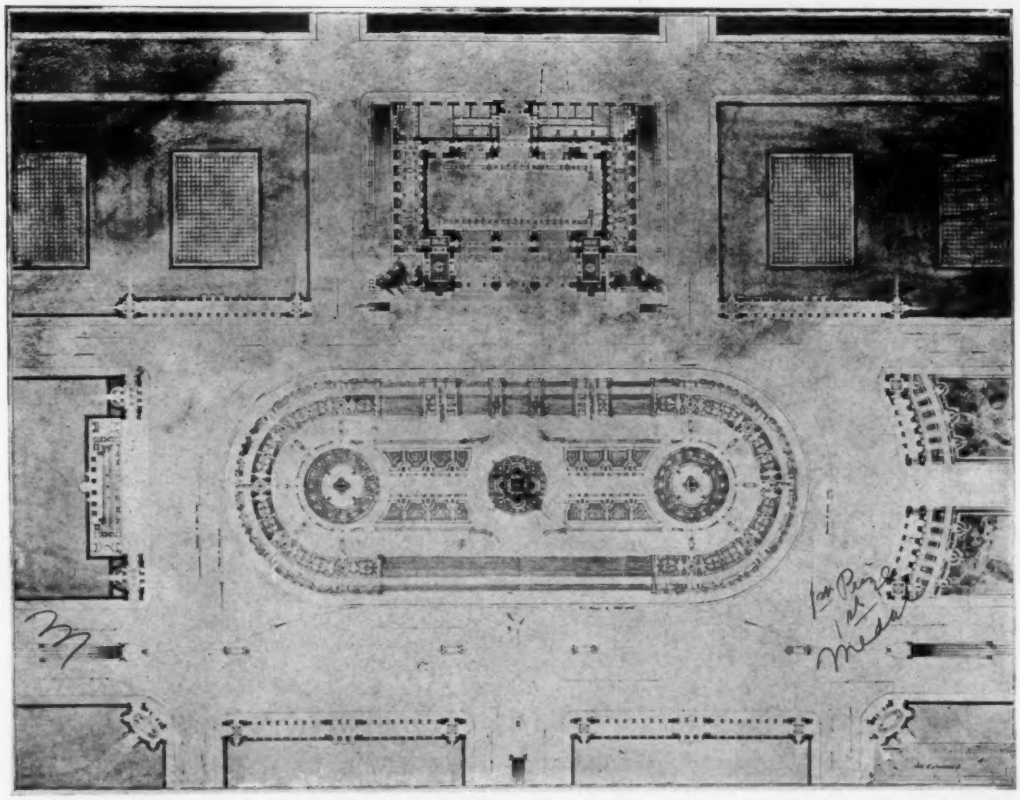
MAIN DINING ROOM

ADDITION TO THE HOTEL AMBASSADOR, ATLANTIC CITY, N. J.

MESSRS. WARREN & WETMORE, *ARCHITECTS*

XUM





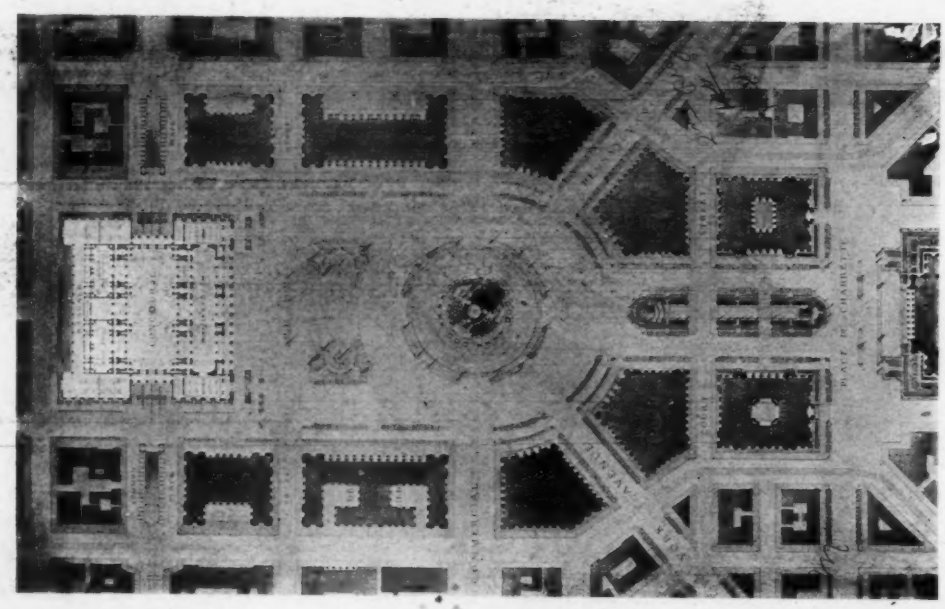
J. G. SCHUHMANN, JR. FIRST PRIZE AND FIRST MEDAL COLUMBIA UNIVERSITY

THE MUNICIPAL ART SOCIETY PRIZE

CLASS "A"—IV PROJET—A RAILROAD STATION PLAZA

STUDENT WORK, BEAUX ARTS INSTITUTE OF DESIGN

XUM



J. S. WHITMAN — SECOND PRIZE AND FIRST MEDAL, THE MUNICIPAL ART SOCIETY PRIZE — CORNELL UNIVERSITY

CLASS "A"—IV PROJET—A RAILROAD STATION PLAZA

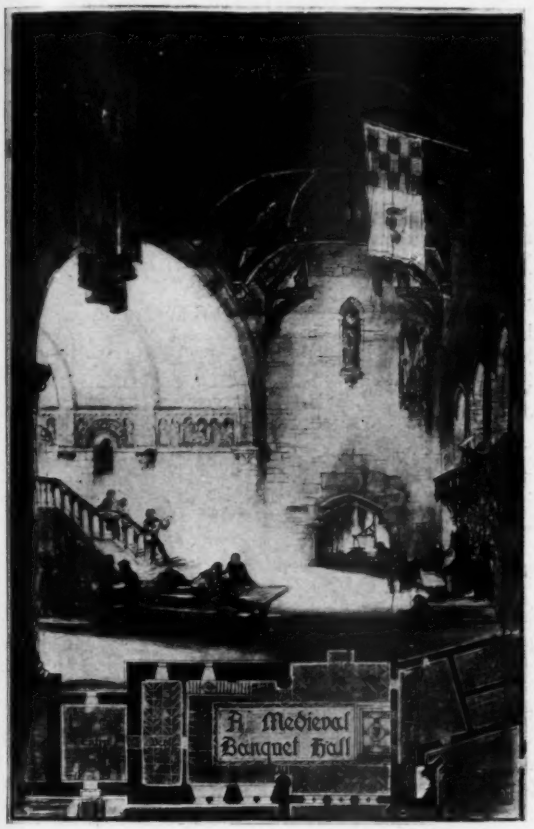
STUDENT WORK, BEAUX ARTS INSTITUTE OF DESIGN

Beaux Arts Institute of Design

(Continued from Page 319)

to the station in such a way as to make them of the least possible danger to those on foot.

Such plazas, from their size and importance, call for a monumental treatment, frequently taking the form of a civic center, surrounded by public and semi-public buildings, such as the City Hall, the Post Office, Hotels, etc., but the



A. O. AHLBERG THIRD MEDAL ATELIER, DENVER

CLASS "A" AND "B" ARCHEOLOGY—III PROJET
A BANQUET HALL IN A MEDIEVAL CASTLE

station itself should be the dominant motive. Fountains, gardens, monuments and other similar features are the natural decorative elements.

The present problem is to design such a Railroad Station Plaza. The site is approximately level, and shall not exceed 50,000 sq. ft. in area within the building line established for the surrounding buildings. These buildings are at the choice of the competitor, it being required only that the station be one of them. The width of the station shall not exceed 500 feet.

JURY OF WARD:

R. M. Hood, L. Warren, F. A. Godley, C. W. Stoughton, C. S. Pilat, L. P. Burnham, P. Cret, H. W. Corbett, D. D. Ellington, M. B. Stout, M. Prevot, J. G. Rogers, R. L. Watmough and P. Sawyer.

JURY FOR SELECTION OF PRIZE WINNING DESIGNS:

R. M. Hood, C. W. Stoughton, C. S. Pilat, J. G. Rogers, R. L. Watmough and P. Sawyer.

NUMBER OF DRAWINGS SUBMITTED: Fifty-eight.

AWARDS:

First prize, $50: J. G. Schuhmann, Jr., Columbia, University, N. Y. C.

Second prize, $25: J. S. Whitman, Cornell University, Ithaca.

First medal: J. G. Schuhman, Jr., Columbia University, N. Y. C.; J. S. Whitman, Cornell University, Ithaca; J. W. Brooks, University of Pennsylvania, Philadelphia.

Second medal: G. W. Trofast-Gillette and G. J. Pfost, Columbia University, N. Y. C.; S. B. Baylinson, S. K. Smith and V. B. Lee, Jr., University of Pennsylvania, Philadelphia.

Mention: J. T. Briggs, G. P. Hritz, I. Safier, F. B. Post, R. W. Craton and M. B. Loewy, Columbia University, N. Y. C.; A. L. Martsolf and M. D. Baldwin, Cornell University, Ithaca; W. R. Frampton, S. P. Stewart, G. N. Pauly, J. P. Davis, M. E. Green, N. D. Kutchukian, C. C. Pribek and A. P. Herrman, Carnegie Institute of Technology, Pittsburgh; S. F. Swales, 50 East 42d street, N. Y. C.; R. L. Walldorff, Syracuse University, Syracuse; L. A. Kruse, Atelier A. Brown, Jr., S. F. A. C., San Francisco; S. H. Brown and E. C. K. Schmidt, "T" Square Club, Phila.; H. L. Stone, J. M. Hirschman, S. J. Laschenski, C. F. Gromme, G. K. Trautwein, P. Domville, E. O. John, E. R. Purves, J. C. Janney, A. Levy and G. M. Martin, University of Pennsylvania, Phila.; J. L. Benson, University of Kansas, Lawrence; W. F. MsCaughey, Jr., and E. Pickering, University of Illinois, Urbana; T. F. Price, Atelier Wynkoop, N. Y. C.

H. C.: J. P. Morgan and R. C. Bowers, Carnegie Institute of Technology, Pittsburgh; J. W. Dawson, University of Kansas, Lawrence.

PROGRAM

SPIERING PRIZE COMPETITION.

A Prize founded in memory of Louis C. Spiering, from funds bequeathed by him to the Society of Beaux-Arts Architects and given for the best solution of the fourth Class "B" Esquisse-Esquisse of the season.

PRIZE, $50.000.

CLASS "B"—IV ESQUISSE-ESQUISSE

The Committee on Architecture proposes as subject of this

"A BAND STAND."

Competition

The importance of public concerts as a means of educating the general public has long been recognized not only in foreign countries, where regimental band concerts are given at frequent intervals, but also in America, though perhaps not here to such a large extent. It is, of course, desirable that as great a number of people as possible attend these concerts, and to this end two types of out-door bandstand have been developed, one open on all sides with the audience surrounding it and the other closed at the back so that it becomes a sounding-board which carries the music to the audience in front.

In this problem either type may be used. The stand is to be placed in a large open space in a park and is not to exceed 40'-0" in its greatest horizontal dimension. Provision should be made in the stand for the safe keeping of the large instruments.

JURY OF AWARD:

W. F. Lamb, H. R. Sedgwick, P. A. Cusachs, F. C. Hirons, H. M. Woolsey, E. V. Meeks, H. Davenport and H. I. Cobb, Jr.

This Jury also served as Jury of Award for Class "A"—IV Esquisse-Esquisse and Class "A" and "B" Archaeology—III Project.

JURY FOR SELECTION OF PRIZE WINNING DESIGN:

W. F. Lamb, H. R. Sedgwick, P. A. Cusachs, H. M. Woolsey, H. Davenport and H. I. Cobb, Jr.

NUMBER OF DRAWINGS SUBMITTED: Fifty-eight.

AWARDS:

Prize, $50: G. N. Pauly, Carnegie Institute of Technology, Pittsburgh.

First Mention: G. N. Pauly, Carnegie Institute of Technology, Pittsburgh; R. H. Bickel, Columbia University, N. Y. C.; L. F. Fuller, Los Angeles Architectural Club, Los Angeles; D. M. Campbell, Yale University, School of Fine Arts, New Haven.

XUM

Mention: R. A. Fisher, K. Snow and R. M. Crosby, Carnegie Institute of Technology, Pittsburgh; E. Babitsky, John Huntington Poly. Inst., Cleveland; E. Penfield, Atelier Wynkoop, N. Y. C.; L. Hamilton, Yale University, School of Fine Arts, New Haven.

PROGRAM

CLASS "A"—IV ESQUISSE-ESQUISSE.

The Committee on Architecture proposes as subject of this Competition.

"THE FACADE OF AN OFFICE BUILDING."

An office building occurring in the middle of a block has a frontage of 80'-0". On the ground floor is a bank which, with its mezzanines, shall not exceed 40'-0" in height, measured from the ground floor to the first office floor. An entrance for the office building and a separate entrance for the bank shall be provided from the street. Above the ground floor there shall be twenty office floors, each 12'-0" in height, floor to floor, and the necessary pent houses, water tanks, elevator machinery, etc., on the roof shall be either concealed or incorporated in the design of the building. The facade of the building is the subject of the problem.

It should be kept in mind that in the design of an office building it is a practical requirement that the offices shall be as well lighted as possible, consistent with good architectural design and expression.

NUMBER OF DRAWINGS SUBMITTED: Nineteen.

AWARDS:

Third Medal: T. B. Epps and A. Levy, University of Pennsylvania, Phila.

Mention: K. Carver Cornell University, Ithaca; G. K. Trautwein, University of Pennsylvania, Phila.; E. Pickering, University of Illinois, Urbana.

PROGRAM

CLASS "A" AND "B" ARCHAEOLOGY—III PROJET

The Committee on Architecture proposes as subject of this Competition:

"A BANQUET HALL IN A MEDIEVAL CASTLE."

The life of the feudal lord of the 12th and 13th centuries was one of fighting and feasting, with the chase to train them for the fight and to furnish food for the feast. This was the mode of living that produced the medieval castle. Built as a refuge from marauding neighbors, its bleak exterior walls, pierced only by loop holes, were surrounded by a deep and wide moat. The castle's only entrance was across a drawbridge protected by a threatening portecullis. Within these austere walls, the rooms were grouped about a courtyard, on which opened the only windows. The main room was the banquet or great hall, the center of the castle life. Here the lord of the castle feasted on the dais, and his retainers ate and slept in the hall below.

On the banquet halls the castle builders lavished all their art. The rooms were entered through a screened entry at one end, while at the other was placed the raised dais of the lord. The fire in the older castles was built in the center of the hall, and the smoke let out through a hole in the roof. Later, massive fireplaces were placed against the walls. A musician's gallery was provided, either over the entry or at the side. The floors of earth or of stone were strewn with rushes, and the cold masonry walls were hung with tapestries and embroideries. The ceiling was either vaulted in stone, trussed in wood, or spanned by massive beams decorated with carving and color. This roofing problem necessitated a narrow room, but did not limit the height.

The subject of this problem is the design and decoration of such a room of about 2,000 square feet floor area.

NUMBER OF DRAWINGS SUBMITTED: Eleven.

AWARDS:

Third Medal: H. B. Pierce and F. K. Draz, Carnegie Institute of Tech., Pittsburgh; A. O. Ahlberg, Atelier Denver, Denver; R. W. Bauhan, Princeton University, Graduate College, Princeton; G. M. Martin, University of Pennsylvania, Phila.

Mention: P. Simpson, Carnegie Institute of Tech., Pittsburgh; G. McCormick, Princeton University, Graduate College, Princeton; S. M. Palm, Pennsylvania State College, State College; S. B. Baylinson and H. L. Stone, University of Pennsylvania, Phila.

SUPPLEMENTARY JUDGMENT OF MARCH 16, 1920

CLASS "B"—III ANALYTIQUE.

"A MEMORIAL GATEWAY."

NUMBER OF DRAWINGS SUBMITTED: One.

AWARD:

Mention: C. A. Smith, Jr., George Washington University, Wash., D. C.

CLASS "B"—III PROJET.

"A HUNTING LODGE."

NUMBER OF DRAWINGS SUBMITTED: 20.

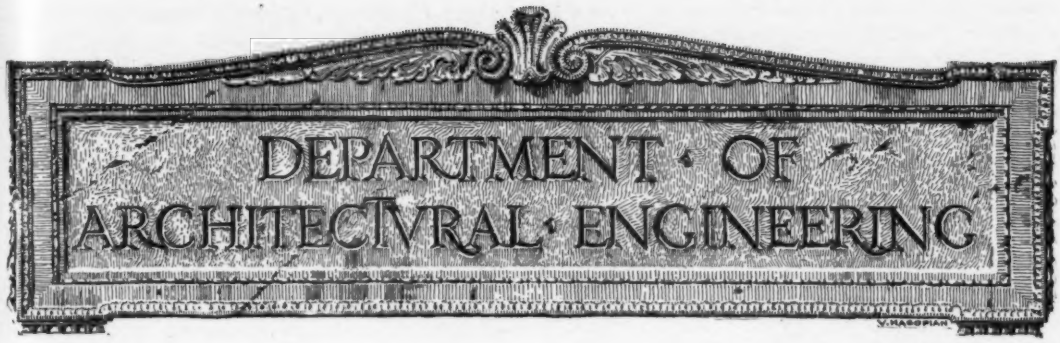
AWARDS:

First Mention: H. T. Aspinwall and H. B. Dierks, Carnegie Inst. of Tech., Pittsburgh.

Mention: H. W. Stone and D. H. Bodin, Carnegie Inst. of Tech, Pittsburgh; T. R. Edwards and H. Bradley, Geo. Washington University, Wash., D. C.; Elizabeth Ayer, J. L. Skoog, P. E. French, F. V. Lockman and J. P. Jones, University of Washington, Seattle.

H. C.: D. H. Oertel, M. C. Drebin, L. J. Rockwell and L. L. Nasbaum, Carnegie Inst. of Tech., Pittsburgh; E. W. Grandstrand, University of Washington, Seattle.

NOTE: These drawings were delayed in transit.



The Revolving Door, Its Characteristics, Design and Installation

Part I

THE fact that a considerable number of revolving doors are annually manufactured, and that these are installed in many buildings, would indicate that such a type of door possesses, under certain conditions at least, a distinct advantage over the usual swinging door.

It is the purpose of these articles to describe the conditions under which the use of the revolving door is advisable, and to point out certain practical considerations in connection with their design, selection and installation.

During the late war many conservation measures were advocated by various governmental bureaus, prominent among which were those of the U. S. Fuel Administration. A considerable saving in the use of coal was accomplished by alterations to existing heating systems, so as to utilize exhaust steam wherever the mechanical equipment of the building made this feature feasible. In some structures, such as department stores, hotels, etc., it was found that the wide entrances permitted the admission of so large a volume of cold air that it was difficult to provide adequate heat during very cold weather by the use of exhaust steam. A study of this condition led to the belief that by installing revolving doors at these entrances, this difficulty would be overcome. In instances where this was done, the results obtained justified the change. Thus from one standpoint, that of conservation of fuel, the revolving door possesses an advantage in buildings where the exits are fairly wide and persons are constantly entering and leaving. In a structure with but one average size entrance, used infrequently, no great advantage would be gained in this direction by installing a revolving door, although other considerations might make this type of door desirable.

In many ground floor occupancies draughts form a serious problem. Cold weather, often accompanied by high winds, is common throughout a large part of the United States for six months during the year. The frequent opening of doors during such weather in buildings occupied as restaurants, department and other stores, banks, etc., not only tends to cause a general lowering of the inside temperature, but also permits draughts to blow across the open floor area, thus endangering the health of the occupants, scattering papers, etc. The complaint on the part of sales girls compelled to work near doorways in department stores, has been emphatic, and records show that such employees are frequently ill as a result of this exposure. In restaurants, even when the doors are arranged on the vestibule plan, draughts are not uncommon and are most objectionable. Therefore, from both the standpoint of fuel conservation and health, there are certain occupancies wherein the revolving door will prove of advantage. There are other instances where the use of this type of door seems essential and and these will be discussed later. It might here be added, however, that revolving doors have also been used for the purpose of keeping out the heat in summer as well as the cold in winter.

In viewing any subject, we must not alone consider the advantages, but also the objections raised, and this applies with equal force to the subject at issue.

While revolving doors have been used in many buildings, their use has sometimes been restricted to

secondary exits, or to certain classes of buildings where the occupancies were not large. In several cities, their use is prohibited for such structures as theatres, dance halls and other places of public assembly, where large crowds may use the exits under emergency conditions. In other occupancies auxiliary swinging doors are sometimes required.

WEST ELEVATION, MUNICIPAL BUILDING, NEW YORK CITY

Prior to the installation of revolving doors, exits on this side could not be used during winter months, due to the excessive external pressure.

Plainly the reason back of such limitation in use was the belief on the part of public officials, that under panic conditions in buildings containing large occupancies the revolving door would not function properly; in other words, that as an emergency exit, it could not be considered on a par with the ordinary door, swinging in the direction of exit travel. This has resulted in the construction of revolving doors with special self-releasing braces, and at present revolving doors of two general types are manufactured. They are termed (a) panic-proof or automatic collapsible, and (b) rigid brace or manually collapsible. In the former the wings are designed to collapse when subjected to undue pressure through the releasing of the braces, after which they either fold together or function as double-acting doors. It is assumed that in the event of a panic, a large stream of persons forced against a panic-proof type of revolving door would exert sufficient pressure on the wings to automatically effect their collapse, after which such a door would offer no greater impediment to exit than an ordinary swinging door. For this reason, it was claimed by the manufacturers and those desiring to install this type of door, that it was amply safe and should be permitted under all circumstances, except possibly in theatres.

In the second type of revolving door, the braces which hold the leaves or wings in position must be

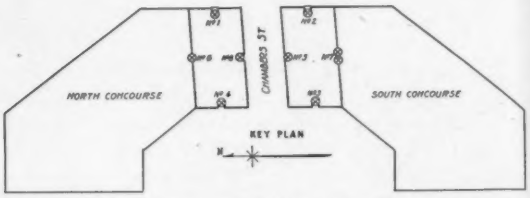


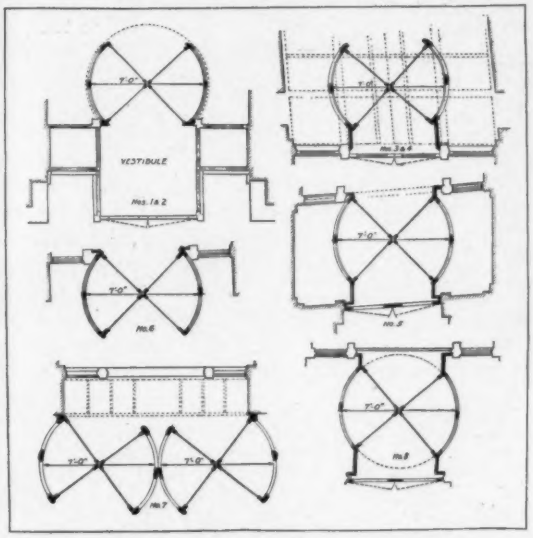
DIAGRAM OF GROUND FLOOR PLAN, MUNICIPAL BUILDING, SHOWING EXITS.

dislocated manually, as they remain rigid and in place irrespective of the intensity of pressure on the wings. Due to the seriousness of the situation, there has resulted a careful study of the various conditions relating to this type of exit door. In New York City a series of tests was made to determine the necessity and safety of revolving doors, with a view towards revising the rules governing their installation. Such a revision followed these tests.

TWO of the most interesting buildings studied in this respect were the Municipal and Equitable Buildings, Manhattan, diagrammatic ground floor plans of which are shown. It will be noted that in both these structures the exits face the four points of the compass. No revolving doors were originally installed in the former building and during preceding winters the swinging doors on the western exposure proved so difficult to open that they were usually kept locked and signs to this effect posted. This, of course, reduced the exit facilities considerably, and was inadvisable. The expedient of locking these doors was not resorted to until a number of accidents to persons using them had occurred. In cold weather the draught throughout the build-

ing was uncomfortable. Strong draughts came into the entrance halls and were carried up the stair and elevator shafts each time entrance doors were opened. This unsatisfactory condition during winter weather led to the installation of panic-proof revolving doors at all entrances several years after the building had been completed and occupied. However, after installation, the revolving doors which were located on the westerly side were continually collapsed—apparently due to the high wind pressure—and the tension in the brace adjustment of such doors was subsequently increased to prevent this happening.

The tests made on this building, which is 26 stories in height, exclusive of the tower, showed that the pressure necessary to revolve these doors varied from five to ten pounds applied three feet two inches from the center, and the average pressure to collapse two opposite wings, with the exception of the doors at the westerly entrance, where the tension had been increased, was 69 pounds. While no actual count was made of the traffic capacity of these doors, it was observed that practically no congestion occurred

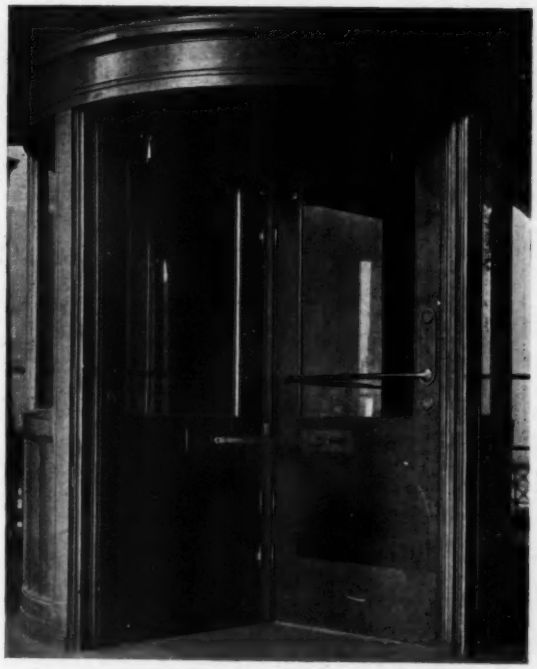


ARRANGEMENT OF REVOLVING DOORS, MUNICIPAL BUILDING

For location see key plan on preceding page

during peak traffic loads, i. e., 9 A. M., noon, and 5 P. M., so that apparently the revolving doors were able to accommodate as many persons as the replaced swinging doors. In a test made at another building by the Public Service Commission it was clearly demonstrated that the revolving doors were able to accommodate as many persons in a given period of time as were swinging doors.

From the diagrams of the Municipal Building exits it will be noted that there are swinging doors adjacent to some of the revolving doors. It required on the average a pressure of 27 pounds to open these. The pressure required to open one of the swinging doors leading to Chambers Street was 51 pounds. This door has since been replaced by a revolving door. In the Equitable Building the entrances are equipped throughout with the panic-proof type of revolving door. A photograph of the Broadway entrance is shown. While no tests were made to determine the pressure necessary to collapse these doors, the actual external pressure on them was de-



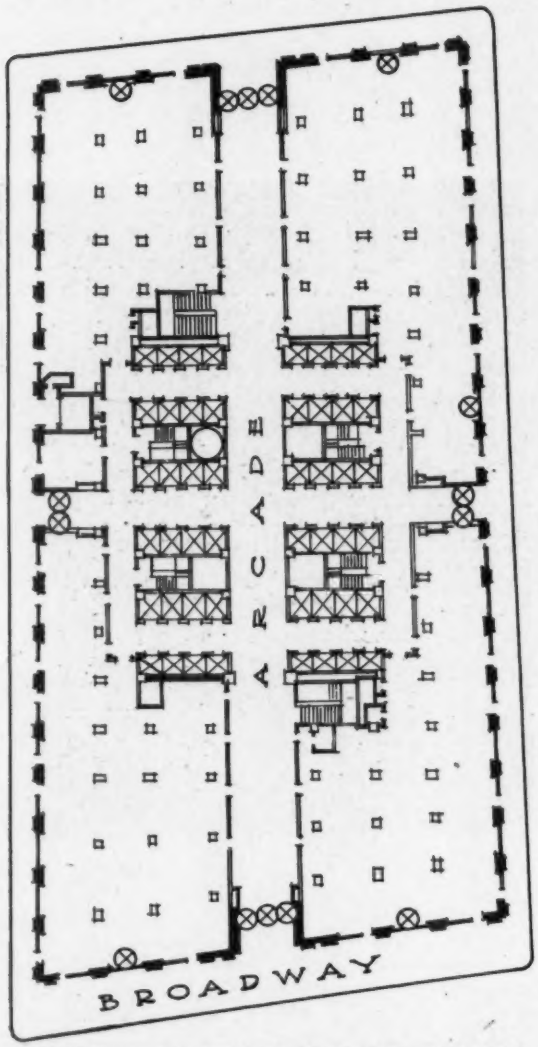
REVOLVING DOOR AT EXIT NO. 6, MUNICIPAL BUILDING

termined by releasing one of the braces and recording the pressure necessary to prevent the wing from being forced *inward*. This pressure was not due to any wind blowing at the time, but is apparently due rather to suction described later. By releasing the wire ties between two wings of one revolving door and holding the dynamometer against its outside edge, a pressure of 72 pounds was recorded. It, therefore, follows that a pressure of over 72 pounds would be necessary to collapse the door, otherwise the ordinary external pressure would be constantly causing collapse.

In high buildings (20 to 30 stories) equipped with swing doors arranged on the vestibule plan, it was found that about 30 pounds pressure was

required to open a door, during outside temperatures of approximately 15 degrees, with but slight wind blowing. To overcome this pressure, a considerable effort would be required on the part of a girl of slight stature.

The most remarkable feature of the tests was the discovery that so long as the outside temperature is lower than that inside, it requires a pressure in excess of that necessary to overcome inertia and friction to open an outwardly swinging door. The external pressure which must be overcome is entirely apart from and in addition to the wind pressure; the action causing it is somewhat analogous to draft action in a chimney. The external pressure increases in amount with the height of the building, the difference in temperature between the inside and the outside air, also, apparently with the number of elevators. It decreases with the efficiency with which vertical shafts such as stairways and elevators are cut off from the entrance hallway.



GROUND FLOOR PLAN, EQUITABLE BUILDING, NEW YORK CITY

Since several indeterminate factors enter, it is not possible to calculate this pressure with any degree of mathematical precision. While in the Equitable Building, 72 pounds applied at the outer edge of a released wing of a revolving door was required to balance the external pressure, in the Woolworth Building, a considerably higher structure, but 30 pounds, or less than half this force, was required to accomplish the same purpose, under very similar weather conditions. In the Municipal Building, revolving doors on the westerly side, designed to collapse at a pressure of 70 pounds applied at the outside edge, were constantly collapsing from external pressure.

Eliminating elevator suction, and assuming a tall building to be a vertical flue or chimney, the pressure exerted at the base, calculated on a theoretical basis for a structure five hundred feet high, such as the Equitable Building, with an outside temperature of zero F. (at which temperature 11.583 cubic feet of air weigh one pound) and an inside temperature of 70 degrees F. (at which temperature 13.342 cubic feet of air weigh one pound) would be 5.6 pounds per square foot. The total pressure on each leaf of the average size revolving door would be 146 pounds, resisted in part by the central shaft and in part by the connecting brace. Were the brace released, a force of 73 pounds would have to be exerted at the outer edge to hold the leaf or wing from being forced inward by the external pressure. To open a swinging door of the same area, a slightly greater force would have to be exerted. To

Standard Table Showing Velocity and Force of Winds

Description	Miles per Hour	Feet per Minute	Feet per Second	Force in lbs. per Sq. Ft.
Perceptible	1	88	1.47	.005
Just Perceptible	2	176	2.93	.020
	3	264	4.4	.044
Gentle Breeze	4	352	5.87	.079
	5	440	7.33	.123
Pleasant Breeze	10	880	14.67	.492
	15	1,320	22.0	1.107
Brisk Wind	20	1,760	29.3	1.968
	25	2,200	36.6	3.075
High Wind	30	2,640	44.0	4.428
	35	3,080	51.3	6.027
Very High Wind	40	3,520	58.6	7.872
	45	3,960	66.0	9.963
Storm	50	4,400	73.3	12.300
Great Storm	60	5,280	88.0	17.712
	70	6,160	102.7	24.108
Hurricane	80	7,040	117.3	31.488
	100	8,800	146.6	49.200

operate a revolving door, the exterior pressure may be neglected since the pressures on opposite wings neutralize each other. Since the revolving door is hung from a ball bearing carriage and the wings are weatherstripped, oscillations are prevented.

Irrespective of the height of building or the outside or inside temperatures, a pressure is exerted at all times when the air is in motion, due to the force of the wind itself. According to tests by the Weather Bureau, the wind may exert a pressure as high as 30 pounds per square foot of vertical surface in most localities. A table of velocities and corresponding wind pressures is given on the preceding page.

accidental collapsing of the revolving door, and, further, it would still permit the quick and automatic collapse of these doors by a crowd in case of fire or emergency. Of course, it is not desirable to have such doors adjusted to pressures higher than necessary, but only sufficient to avoid their accidental collapsing from external pressure. That this is serious in very tall buildings is vouched for by the managers of such structures. In one instance, while no trouble occurred during the summer, yet after cold weather came, several accidents were caused by accidental collapsing and the accompanying shattering of the glass panels. This led to the

BATTERY OF THREE REVOLVING DOORS AT BROADWAY ENTRANCE OF EQUITABLE BUILDING
More persons pass through these daily than through the entrance of any other building in the United States

Through actual observation, it appears that the wind pressure exerted on the outside of a high building is usually much greater than that on the outside of a low building. This is undoubtedly due to the vertical wall of the building acting as a dam against the action of the wind and deflecting downward.

In view of the foregoing factors of wind and such other pressures as might be exerted against the revolving door, it seems advisable when installing doors of the automatically collapsible type in high buildings to require them to be adjusted so that they will collapse at a pressure ranging from 100 to 150 pounds, exerted at the outer edge of the wings. This would seem to insure against any use of wire glass for all the revolving doors in this building, as well as a readjusting of the tension.

Where vestibules are provided, it is difficult, under unfavorable weather conditions, for the average individual to open the swinging street doors, which are usually required by local ordinances to open out, or *against* the pressure. While a pressure of five pounds gives passage through a revolving door, often one of thirty pounds is required to open a swinging door similarly located.

In high buildings and especially those located in windy districts, the revolving door appears to offer a solution to three very serious problems, since it effects more economcial heating, eliminates draughts, and provides easily operated, yet safe, exit doors.

Progress Report of National Public Works Department Association

By M. O. LEIGHTON, *Chairman*

THE technical men who started the public works movement ought to know the accomplishments to date so that they may plan wisely for the future. This is a period of recess in legislative matters and we are given an opportunity to derive lessons from the events of the past.

Like all other movements of this kind, there are stages in which there is much visible progress and others in which development can be discerned only by those in intimate touch. We are now in one of the latter stages in which the principal effort is the preparation for achievement at the fall session of Congress.

We have won decisively in the first phase of this campaign, which is the establishment of the underlying principle. The leaders of Congress are in agreement on the principle and some of them are working on its details during the present legislative recess. The candidates for president and vice-president in both great parties have signified their approval and in this they are in step with the great leaders of thought and action the country over.

The second phase of the campaign, which consists of securing the right kind of a department of public works, will be more laborious than the first. It involves the minute consideration of details, the sifting of evidence and the presentation of the results in convincing form. The supporters of this movement should not make the mistake of believing that the campaign is over merely because the principle has been accepted. It is obvious that the wrong kind of a Department of Public Works will be as bad if not worse than the present organization of governmental functions.

THE most troublesome as well as the most inexcusable setback has been the failure of the movement in the referendum of the Chamber of Commerce, U. S. A. This was plainly due first to the lack of adequate publicity, and second, to the inaction of the local technical bodies which were depended upon to take care of the issue in their own local commercial organizations. Our finances would not permit us to handle the first, but we had every good reason to expect diligence on the part of "our own crowd" in the second. Evidence is constantly being accumulated that the important commercial bodies which voted adversely on that referendum did so in ignorance of the character, intent and purport of the movement. Reports received from certain important places in which local chambers of commerce voted adversely are to the effect that the adverse action was the direct result of the influence of certain members of the Corps of Engineers, U. S. Army. If such be the case, our only comment is that these engineer officers acted within their rights and in accordance with their convictions. The incident substantiates the previous announcements of this Association that the Corps of Engineers is a powerful body and the effects of its opposition to a measure of this kind must not be minimized.

From the present until the convening of Congress on the first Tuesday of December next, the architects, engineers and technical men of other branches throughout the country have a rare opportunity to further this movement because Congress is in recess and the representatives are at home. If each man who is convinced of the necessity for this reform would embrace this opportunity to instruct his representative in Congress and to enlist his active cooperation in the furtherance of this legislation, progress at the next session of Congress would be rapid and certain. For the present, members of Congress are almost out of reach of the Association's officers. The field of intensive effort has shifted "back home" where the technical men of the country may render first aid.

Governmental Bulletins Issued

The Department of Commerce, Bureau of Standards, Washington, D. C., of which S. W. Stratton is the director, announces that it has just issued the following circulars:

No. 39. Household Weights and Measures.

No. 89. Recommended Specifications for White Paint and Tinted Paints Made on a White Base—Semipaste and Ready Mixed.

No. 90. Recommended Specifications for Red Lead, Dry and Paste.

No. 91. Recommended Specification for Ocher, Dry and Paste.

No. 93. Recommended Specification for Iron-Oxide and Iron-Hydroxide Paints.

No. 94. Recommended Specification for Black Paint, Semipaste and Ready-Mixed.

No. 152. Investigation of the Compressive Strength of Rectangular Spruce Struts.

Shall Architect or Engineer Predominate in Stadia Design

Architect Answers Resolutions Passed By Council of Associated Engineering Societies of Seattle, Wash.

Charles H. Bebb,* well known Seattle architect, in a letter to Pacific Builder and Engineer, takes exception to certain resolutions passed by the Council of the Associated Engineering Societies of Seattle and addressed to the Board of Regents of the University of Washington, wherein it was sought to have the Washington Field Stadium built under the direct supervision of engineers rather than architects. This communication to the Board of Regents was published in Pacific Builder and Engineer under date of May 28. Portions of Mr. Bebb's letter, taking exception to the views therein expressed follow:

Seattle, Wash., June 21, 1920.

Pacific Builder & Engineer,
602 Pacific Block.

The communication appearing in last month's issue of your publication addressed by the Council of the Associated Engineering Sccieties of Seattle to the Board of Regents, University of Washington in regard to the Washington Field Stadium now being constructed on the campus of the State University brings up again the perennial question of the relationship between the architect and the engineer.

Purely from the altruistic standpoint if we correctly construe the set of resolutions as submitted to their final analysis the Associated Engineering Societies of Seattle in the fear that the stadium may be built under the direct supervision of architects and upon the theory that such a building should be primarily the work of the engineer while admitting the necessity of collaboration with the architect, somebody to throw in here and there a veneer to cover up the hard bones of the skeleton frame as it were, feel constrained to point out to the Board of Regents and public officials charged with the responsibility of public works their duty to properly distinguish between what works should be assigned to the architect and what to the engineer.

The logical basis of reasoning from the engineer's standpoint can only be that the physical properties of the building are more vitally the prime factors than the purposes and conception of the building as a whole. That the expert knowledge of the bearing values of the soil, the properties of re-enforced concrete, the strength of columns, girders and joists, etc., are the primary points to be considered and that the planning and design are secondary considerations requiring reluctantly the collaboration of the architect. This argument would hold good were it a fact, for every kind and class of building erected by human hands from the mighty Woolworth building in New York to the simplest structure erected in space for in none can we neglect at least a modicum of engineering knowledge.

It is possible of course, the Associated Engineering Societies might admit in the matter of buildings that the position of the architect should predominate. But when it comes to a stadium the resolution sets forth "Whereas a structure of the type and for the purposes here contemplated is essentially and predominantly an engineering structure and its architectural features a secondary consideration," and upon this hypothesis the Associated Engineering Societies consider the architect is only a mere adjunct. In other words in the thought of HOW the structure should be built all consideration of WHY is lost sight of.

Considering the building from the standpoint of its individual requirements, while we may be wrong, it being human to err, we believe the architect by reason of training and experience is more competent to successfully plan it than the engineer, that having in view the purposes of the building he will give better consideration to the seating and sight lines, circulation and methods of ingress and egress, drainage and comfort stations and all other desiderati pertinent to the structure.

It is in the question of design, we presume, that the Associated Engineering Societies admit the necessity of collaboration between architect and engineer, and we admit it also. But which shall predominate and which subordinate? In the completed building we shall look for unity, symmetry, proportion, the harmonic relation of parts to the whole and these are thoughts not consonant with the education and training of the engineer and again we doubt the hypothesis upon which the Associated Engineering Societies have based their resolutions, namely, that a stadium "is essentially and predominantly an engineering structure and its architectural features a secondary consideration."

If we look for precedent and seek the authors, or creators of other stadiums that have arisen in this country in the past years we find that the Harvard Stadium is credited to the architectural firm of Messrs. McKim, Mead & White; the Princeton Stadium to Mr. H. J. Hardenberg; the Chicago Stadium to Messrs. Holabird & Roche, the University of Chicago Stadium to Messrs. Coolidge & Hodgson, all of them architects.

The final paragraph of the resolutions offered by the Associated Engineering Societies disclaims that anything of a personal nature is intended. This is, of course, as it should be. In an undertaking so important as the building of this stadium personalities are as inconsequential as the drops of the last patter of rain on Puget Sound. It is somewhat extraordinary, however, that in all the publicity that has been given this matter, the repeated publication of the plans and birds-eye view of the proposed building, the Council of the Associated Engineering Societies has failed to observe that the name of a well known engineer has always been associated with the names of the architects.

CHARLES H. BEBB, F. A. I. A.

*Mr. Charles H. Bebb, F.A.I.A., and Mr. Carl F. Gould, A.A.I.A., are architects for the new Seattle stadium for the University of Washington, described in the June 23d issue of The American Architect. The names of the architects were inadvertently omitted in that issue.

Historical Notes on Engineer and Architect

THE following historical notes are from a somewhat voluminous paper entitled "A Study of Definitions of Professional Engineer and Engineering" by Alfred D. Flinn, with the collaboration of Alfred W. Kiddle and Harrison W. Craver, recently issued by Engineering Council.

Historically the builders of fortifications, the military engineer, and the builder of dwellings and temples, the architect, were earliest on the ground. The distinction was then between soldier and architect, not between engineer and architect. All of us who have translated him, remember that Julius Caesar built a bridge—and we know of the military Roman roads of England.

The very considerable Avigon bridge across the Rhone River (about 1200 A.D.), with eighteen clear arch spans of from sixty-five to eighty feet each, in a swift-flowing river subject to ice jams, was regarded as a work of architecture. The term Architect of Bridges is authentic. Michael Angelo (1475-1564) was not only the Architect of St. Peters, but he designed the fortifications of Rome.

Leonardo da Vinci (1852-1519) not only made plans for Milan Cathedral, and paitned the "Last Supper" and "Mona Lisa," but he was a Chief Military Engineer, and a Hydraulic Engineer dealing with irrigation, river control and harbor works, and designed a flight of six vessel-locks. He styled himself engineer as well as architect.

The term Architect in its etymology means "Master Builder."

In the evolution of construction, two classes of builders have by some vagary of word-growth been verbally torn apart and their kinship sometimes questioned. It is odd that in this juggling of old terms and the emergence of new terms, one class of engineers—and a class whose work is of the highly-specialized, technical kind which deals with the direction of great mechanical forces,—has kept the old family name, the Naval Architects. An accident of name-evolution has tended to segregate one class of master builders from the other classes of master builders. It may be thought that initiative and imagination are the qualities of Architects, while Engineers deal with the prose of construction. Analysis will, however, reveal the fact that eighty per cent. of the architectural structures of our cities are commonplace, with no peculiar beauty or originality. Now and again a Woolworth building springs skyward, worthy of the phrase "frozen music," and we recognize again the master builder of the sixteenth century. But the same quality of mind went into the wireless telegraph, the airplane, the Panama canal and hydroelectric developments and transmission at Niagara. Engineers without creative imagination are as mediocre as Architects without this same vital and indispensable attribute of the master builder. Architects must recognize that scientific imagination is on the same high plane as their own best creative thought; and Engineers must concede the esthetic contribution of Architects in adding to the durable satisfaction of life. Both are creative workers.

Action of the American Institute of Architects on the Quantity Survey System

IN our July 28th issue in commenting on the action of Engineering Council in endorsing the use of the Quantity Survey system, it was erroneously stated that no action had been taken on this matter by the Institute.

A recent communication from D. Everett Waid, Treasurer of the American Institute of Architects, states in part:

"The Institute went on record at its May Convention as favoring in principle the use of the quantity survey system by architects, preparatory to receiving bids on construction work.

"I believe I am correct in saying that it is the conviction of the Board of Directors that it will be a matter of gradual education of the profession and of builders generally before we can expect to see the present American system of each contractor taking off his own quantities displaced by a radically different method, which, if developed on right lines, should ultimately result in an economic saving. The change will be necessarily so revolutionary that it can be accomplished, I believe, only in a gradual manner. The attitude of the Executive Committee is one which will encourage the introduction of the system as means for its experimental trial become available. At present there is machinery for such trials in only two or three large cities."

The official stamp of approval by The American Institute of Architects, the Associated General Contractors of America and Engineering Council should do much to facilitate the extended use of this commendable system by architects in general.

Current News

Happenings and Comments in the Field of Architecture and the Allied Arts

Building Problem Discussed

Architects, builders, engineers, labor men and others met at Atlantic City recently to consider a plan to overcome present conditions in the building trade. The meeting was presided over by E. J. Russell of the American Institute of Architects, New York. The principal address of the evening was delivered by Robert E. Kohn.

The conference was held under the auspices of the National Board of Jurisdictional Awards in the building trades industry. Several remedies were suggested and a committee appointed to try to have them generally adopted.

Post Office Buildings in New York

Not since 1912, when the post office was built at the Pennsylvania Terminal, has there been any new building. This was before the establishment of the parcels post and the increased volume of mail has been housed in rented buildings quite ill adapted for that use.

It is now announced that the Post Office Department has leased a three-story structure which is soon to be built on West 38th street, between Seventh and Eighth avenues, at a rental of $3,500,000 for a twenty-year period. The new building will have a floor area of 57,000 square feet.

St. Louis' Problem

St. Louis, Mo., has issued a City Plan Commission Report urging that the city be given more control in the development of land. A shortage of 10,122 dwellings in 1921 has been estimated. It is regarded as unreasonable that the solution of this problem should be left to chance or to the whim of an individual landowner.

The desirable results of wider municipal control are as follows:

Old property, already having all city improvements, will be built up; new property, when opened, will be more promptly utilized, greatly reducing the charges, which result in no additional profit to the first owners, but add greatly to the cost to the purchaser. The city department of public service will be enabled to make a comprehensive and efficient plan for the extension of public utilities and other public conveniences.

Such a control of land development should eliminate to a large degree unscrupulous speculations in real estate, resulting in lower first cost for home sites and in a reduction of delay in securing street and utility improvements. There will also be a decrease in rent profiteering, overcrowding with its attendant unwholesomenesses of increased disease and crime and unstable development of city growth.

Berlin's Populace Discontented With Housing Conditions

A mass meeting was recently held in Berlin in the Schlossplatz between the Imperial Palace on Unter den Linden and the Kaiser's stables. It was attended by 4,000 people who are discontented with the efforts of the various housing commissions. "We demand," said one of the speakers, hanging from a piece of statuary, "that the 800 rooms of the palace be placed at the disposal of the homeless Berlin families. We demand that the empty barracks which formerly housed more than 24 regiments be converted into dwellings until the housing privation has passed." The resolutions were adopted but the new tenants have not yet taken possession.

More Electric Homes Go Up in the West

The San Francisco *Chronicle* points with pride to the recognition given to the popularity of the Electric Home in St. Francis Wood, which has stimulated the erection of a number of similar buildings.

These homes will be electrical homes in every sense and it is proposed to make St. Francis Wood a community of electrical homes.

One of the big obstacles that the "own your home" has had to overcome was that offered by the servant problem. Electricity has made a complete demonstration over this stumbling block.

The new homes in St. Francis Wood are being provided with double wiring circuits for illumination purposes and power appliances. The power circuit reduces to less than half the cost of operation of electrical appliances. The popularity of this modern way of operating the home is demonstrated by the fact that more than 18,000 visitors passed through the Electrical Home during its short exhibition.

XUM

Wooden Houses for Northern France

The Review of the American Chamber of Commerce in France says that McArthur Brothers, of New York (8, rue St. Florentin, Paris), have delivered 500 of an order of 1,000 wooden houses for the devasted regions of northern France. These houses are 7 metres square and have three rooms and a shed. They are delivered in sections and complete, including windows, doors, glass, paint, nails, bolts, all ready for the erection, which is being done under the direction of the Department of the Ponts-et- Chaussées. About a hundred of these houses are being ereected in the Arras and Lens districts.

Hollow Bricks in England

A new brick that has recently been introduced in England is nearly five times as large as an ordinary brick, but in comparison is much less heavy and is easily handled, states the *Scientific American*. The lighter weight results from the hollowing out of the brick to provide air layers. By the shaping of the ends the existence of joints running all the way through the wall is avoided. The brick is, as a rule, made of one part of cement and four parts sand by simple hand machinery. Three men can make enough bricks in a day to build 400 to 500 square feet of wall. A further economy is effected by the manner of laying the walls, inasmuch as the ends and bottoms of the bricks need only de dipped in a thin lime mortar mixed with a small amount of cement. If laid in the usual way the air channels in the bricks would become filled.

Increased Costs of Building Less Than of Commodities Costs

There is much talk of the high cost of building and in this connection it is satisfying to see the computations made by the Aberthaw Construction Co. which were published in the Boston News Bureau.

Taking 1914 as a standard, it is said that commodity prices had risen 20 per cent., and building prices 17 per cent.. By the end of 1917 general commodities had advanced 89 per cent., and building but 39 per cent. Building costs through 1919 were 90 per cent. above the 1914 level, whereas general commodities were up 138 per cent. The latest computation which this company has made show building costs to be 135 per cent. above the 1914 level, while general commodity prices are 142 per cent. above that level.

Old-Time New England

One of the results of the celebration of the three hundredth anniversary of the landing of the Pilgrims at Plymouth is to increase public interest in things bearing upon the antiquities of New England.

It is, therefore, fitting to call attention to the Society for the Preservation of New England Antiquities, which has headquarters in Boston.

Beginning with the July, 1920, issue, the bulletin of this society will now be published quarterly under the more comprehensive title of "Old Time New England." The magazine will, as heretofore, be devoted to antiquarian research and to the preservation of old buildings and landmarks. But it is proposed to increase the scope of activities. The current issue is devoted not only to ancient buildings, but to household furnishings, domestic arts and crafts, manners and customs, and other matters of interest. Copious illustrations will afford to architects and their clients a comprehensive picture of these by-gone days. Interesting buildings will be described, and much space will be given to the artists and craftsmen of the early days. The society contemplates some important restorations, and will also develop a valuable museum.

For Adequate Electric Wiring

Much difficulty is experienced in urging architects to wire their buildings sufficiently for the proper use of electric appliances. A Pacific Coast electrical society states that they are obstructing the wider use of home labor saving devices by America's overworked housewives. Says this society very graphically:

"Thousands of women still bend over the washtub, hundreds of thousands are still condemned to uncounted hours of dishpan drudgery, millions still sweat and suffer at the ironing board, because designers and builders of dwellings fail or refuse to provide the wiring connections which would permit these menial tasks being done by electrical machinery."

A further retardant in this simplification is the fact that in the case of washing, ironing and dishwashing machines, space has not been provided in kitchen or laundry where they might properly be located.

The buyer then faces the expense of alterations and additional wiring out of all proportion to what the cost would have been had the house been equipped originally, and frequently goes without things that are really desired, because of someone else's oversight in the adequate wiring and outlets for electric appliances.

Builders Use Camp Dix Materials to Reduce Costs

Lumber and other building materials and equipment formerly used at Camp Mills, Mineola, Long Island, are being used by small house builders in the surrounding towns to add appreciably to the supply of residential properties. In Mineola, Hempstead, Baldwin, Freeport and neighboring communities the materials formerly part of dormitory, hospital, kitchen, store houses, and other cantonment buildings, which formed the now rapidly disappearing camp are being reconstructed into small and substantial one-family houses that will materially relieve the dwelling shortage. Many of the houses have been sold from the plans, so keen is the demand for properties of this type.

Five Million Dollars for Canadian Highways

Five million dollars will be spent this year in making better the main highways of Canada through Federal and provincial grants. Of this amount the Dominion Government will contribute $2,000,000 and the provincial governments $3,000,000. This is the first year in which the road money has been available, and in view of the time taken in preparing plans the initial year's outlays will not be so heavy as in some succeeding years.

The improvement scheme, however, is general. Before the Dominion Government makes any grant for the purpose the provinces have to file general plans, and every one of them, from coast to coast, has done so already. The detailed plans also need approval by the Dominion Government, and this has been done in several instances and work is under way. While the provinces may improve whatever roads they choose to, the Dominion grant of 40 per cent. of the cost is restricted to main or trunk highways.

Community Centers for Indianapolis

The report of the Park Commissioners of Indianapolis plans the establishment in various parts of the city of neighborhood centers which, it states, shall embody the following: the neighborhood park, the playground, the swimming pool, the bathhouse facilities, and the community building, which is in reality "the workshop" in which all type of wholesome legitimate activities may be carried on. These buildings will have such facilities as a main auditorium with a stage and scenery, a main assembly room, a lounging room, gamerooms, reading rooms, committee rooms together with the ordinary comfort station facilities and in some cases locker rooms. Such a building should become a little town-hall in the community and in it will be grouped all types of community activities and all types of organized work —such as athletic clubs, women's clubs, Boy Scouts, forums, parent-teacher organizations.

Thirteen playground swimming pools and two park pools for adults are expected to be ready for use next summer.

Progress Made in the Art of Stained Glass

All the valuable stained glass windows were removed from the large churches in Paris in order to protect them against air raids and destruction by long range gunfire during the war. The windows were stored in safe places and remained unharmed. They are now to be carefully retouched and then to be reinserted. These windows, we learn from the *Scientific American*, total approximately 470,000 square yards of stained glass, and their renovating will take a long time and will be of considerable expense.

A wide and remunerative scope of work has thus been opened to the Paris Association of Glass Stainers, some members of which are noted artists. Although this association and some other guilds of glass stainers work entirely in a mediaeval craft, it would be wrong to conclude that their methods are behind the times. Fifty years ago the old secret of staining glass, which was lost with the decline of art in the seventeenth and eighteenth centuries, was rediscovered and, with the aid of chemistry, has made remarkable progress. This is shown by the fact that today the glass stainer disposes of over five thousand different pigments, while in the twelfth century, the golden age of glass staining, only twelve colors were known.

Olean (N. Y.) Builds a Park

Five years ago there was a public dump caused by a big levee project for the prevention of annual innundations at the time of the spring floods. The city determined to convert the dump into a park and the State College of Forestry at Syracuse was asked to help in the development.

Plans were laid which included not only the extensive planting of trees and nearly 3,000 flowering shrubs, but walks and the few necessary buildings. One of the methods by which the work was pushed ahead was the planting of about 150 trees by school children wh oraised funds for the trees by solicitation. A small concrete marker was placed at the base of the tree with the names of the young planters on it.

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News from Various Sources

An entire quarter of the city of Florence, Italy, was shattered by the explosions in the powder magazine at San Gervasio.

* * *

Quincy, Massachusetts, favors as its war memorial a building which shall be entirely separate in style and location from all other municipal buildings.

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Contracts for constructon in Lima, Peru, of dwellings, churches and office buildings have been let to a New York firm. The work is being financed by the Roman Catholic Church.

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A meeting of the Board of Directors of the Northwest Master Builders' Assn., held in Aberdeen, Wash., endorses the proposed Federal Public Works Department.

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Of the 1,206 new students who have submitted their records to Northwestern University, not more than half can be admitted on account of lack of boarding places.

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West Coast lumber interests have decided upon the formation of the West Coast Forest Products' Bureau, whose principal function is to be the education of Eastern consumers.

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A worker in a house near Derby Academy, Hingham, found a piece of paper in a mouse nest which proved to be a receipted bill for the construction of the house and was dated 200 years ago.

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On August 10, H. L. Kerwin, Director of Conciliation, Department of Labor, reported that there were before the department 19 strikes and 37 controversies which had not reached the strike stage.

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The city planning committee of the Association of Commerce will ask the public land commission to change the proposed ordinance, limiting the height of buildings in Milwaukee to 125 feet, to permit erection of buildings 175 feet or approximately sixteen stories.

* * *

The Art Students' League of 215 West 57th St., New York, has issued its catalogue for the season of 1920-1921. The pamphlet, profusely illustrated with cuts of the work of the students in the different classes, gives a history of the League, its object and management, as well as a complete list of the classes and instructors.

* * *

Plans for only one apartment house and one dwelling were filed in Manhattan in July, compared with plans for five theatres, 115 garages and three loft structures, indicating that despite agitation for construction of dwelling building trend was reflecting little interest in housing situation. According to Tenement House Commissioner Mann, normal construction in New York is about 28,000 apartments a year, in addition to two-family houses and hotel apartments, but during past four years average construction has dwindled to about 4,000 a year.

Personals

A. Frank Wickes, architect, formerly located at 506 Gary Theatre Bldg., has moved to larger quarters in suite 206 Harries Bldg., Gary, Indiana.

E. C. Hemmings & Jens C. Petersen, architects, and Leo D. Hudnutt, engineer, formerly the Sacramento Elementary School Commission, have opened offices in City Library Bldg., where they desire samples and catalogues.

George P. Fernald, formerly connected with the offices of Little & Brown, of Boston, died in Taormina, Sicily, where he had gone in search of health. Mr. Fernald was about fifty years old. His work has been mostly in the way of interior wall decorations for large private residences. He was a member of the Boston Society of Architects and the Boston Architectural Society.

Henry T. Barnham and Charles L. Hofmann have formed a partnership for architectural practice under the firm name of Barnham & Hofmann, with offices in the Chamber of Commerce Bldg., Richmond, Va.

United States Civil Service Examination

DRAFTSMAN, ARCHITECTURAL AND STRUCTURAL STEEL

September 14, 1920

The United States Civil Service Commission announces an open competitive examination for draftsman, architectural and structural steel. Two vacancies in the Lighthouse Service, Milwaukee, Wis., at $1,560 to $1,800 a year, and vacancies in positions requiring similar qualifications throughout the United States, at these or higher or lower salaries, will be filled from this examination, unless it is found in the interest of the service to fill any vacancy by reinstatements, transfer, or promotion.

For circular setting forth the full particulars. write Civil Service Commission, Washington, D. C.

Weekly Review of the Construction Field

With Reports of Special Correspondents in Prominent Regional Centers

WITH the approach of October 1 the housing shortage is assuming a most acute aspect, and there is an uneasy feeling that unless municipal, state and national governments take decisive steps a condition already extremely grave may become something that will work a very great amount of suffering.

In almost every important city throughout the United States there are being made efforts, more or less practical, to relieve the situation. But these matters move too slowly to be of present and practical use.

In Minnesota the Department of Agriculture is seeking some concrete plan to submit to the Legislature at its next session which will encourage capital to build homes. Large corporations that have built and expected to begin operations are confronted with an almost certain suspension owing to the shortage of houses.

A review of the housing situation in New York State discloses many angles. It is contended that the shortage of houses and the activity that is going on in other departments of building is due to the action of the Legislature in placing a limit on rentals and in other ways restricting the owner's use of his property. While very few plans for tenements or apartment houses are being filed, there is apparently no lack of money for building garages and theatres, and there appears to be no difficulty in finding labor and materials for that sort of building which is now booming. The Legislature by a somewhat unwise action has contributed to this shortage, and it must likewise remedy the results of its own error. Just how that may be accomplished is the problem now engaging close attention.

A scheme that has perhaps met less adverse criticism than any other is one proposed by Senator Lockwood of the New York Legislature. He would except mortgages on buildings from the State income tax. This would afford but a moderate inducement to investment, as there is no present hope of the exemption from the much heavier Federal income tax. Senator Lockwood, it is stated, has also under consideration a bill to exempt all building improvements for dwelling purposes from taxation for a period of ten years. Just how far such exemptions would stimulate investment in buildings intended for housing is, of course, problematical. The condition is with us; the remedy lies in the dim distance of legislative action.

In New Jersey there is already apparent a strong disposition to criticise the tardy action of the Legislature in coming to the relief of the people of the State in the matter of housing. The question of congestion due to lack of housing is one that is causing much concern to health officials, who see in its continuance a very pronounced danger to the public health. In fact, it is probably through just such an effect that a nation-wide movement will be inaugurated to find a remedy for a condition that has now spread to every State and will undoubtedly become a menace to public health.

St. Louis, Mo., boasts that it is one of the few cities which has devised and successfully put into operation a practical scheme for relieving the housing shortage. A $2,000,000 corporation, supported by the Chamber of Commerce and the city commercial clubs, has been organized and, it is stated, is successfully providing the men of moderate income with homes. In fact, St. Louis claims that through the operation of this and similar organizations there is practically no very serious housing shortage there.

One of the most interesting features of this housing enterprise is the scheme of payment. This calls for 10 per cent. cash on the price of the house and the balance in ten or twelve years. On the ten-year plan the purchaser pays $11.35 per year on every thousand of the selling price after the 10 per cent. cash payment has been deducted. On the twelve-year plan he pays $9.95 per thousand of debt. The association will not permit a man to invest more than 27 per cent. of his monthly income in one of their houses—a feature of the transaction which is clearly specified in the deed.

In Boston a most unusual remedy is suggested. Mr. R. P. Delano, of the Dorchester Board of Trade, has suggested to Mayor Peters of Boston that approximately $10,000,000 originally contributed by the public to aid in great emergencies, such as the funds for San Francisco, Armenia, Halifax and India, and also those created by some of the many "drives" during the war, and which lie unexpended in Boston banks, might be used in helping to solve the housing problem. Probably similar funds exist in other cities. Their use as loaning capital would not impair their integrity.

In Delaware, and particularly in Wilmington, where large corporations are located, the housing question is assuming such large proportions as seriously to menace the uninterrupted progress of manufacturing.

(Special Correspondence to The American Architect)

Seattle.—Careful canvass among architects of the North Pacific Coast territory shows that high prices of building essentials, excepting lumber, is holding off fall building projects, and this part of the season, which on the Pacific Coast is frequently the most active of the year, due to climatic conditions which permit of outdoor operations, will be very quiet unless there is some radical change in the outlook.

Heavy sheet metal is coming through from the East more readily than thirty to sixty days, but small pipe, specifically in sizes of an inch down to three-quarters and one-half are continually scarce. To Pacific Coast jobbers the eastern mills are insisting that higher prices and a more acute shortage are coming. Probably the only normal pipe supply on the Pacific Coast today is in cast iron soil pipe. The shortage from the British Columbia to the Mexican line varies only in degree, and this was checked forcibly last week when the Crane company at Seattle shipped a carload of a half to two inch black and galvanized pipe to Los Angeles to supply an acute shortage there.

Enamelware advanced 10 per cent., and delivery of staple assortments is six to eight weeks behind. Special sizes will not be accepted by the mills for delivery in less than 90 to 120 days, and bathtubs are not placed in less than six months. Special wall tubs, eastern mills report, cannot be accepted for delivery under six to nine months. Conditions as to vitroware are very similar.

North Coast architects report only two minor contracts for the week, $12,000 and $20,000, respectively, and almost without exception it is reported that there are no large jobs in sight. The high price wave is cutting severely into the smaller jobs. Investors say they will wait, preferring to save the artifificial expense which obviously would have to come out of the property and caused continued unhealthy rentals.

Plaster is scarce, with the responsibility on the carriers. A little is arriving at Seattle from Utah, but the bulk is being drawn from California. The largest cement plants on the Pacific Coast are clustered within a radius of 125 miles of Seattle, but due to the condition of the car supply a Seattle jobber can get fire brick and plaster from the East as quickly as he can spot a car of cement from his own territory.

Fire brick is $5 higher at $75 warehouse basis and common brick is $16 and $17 at the yard. Clay products this week jumped 200 per cent., the first change in quotations in several months. Sewer pipe is about 20 per cent. higher.

Fir lumber is unsettled. The advance in freight rates did not produce the effect of a buying rush from eastern builders that has always heretofore stiffened prices, and inasmuch as eastern buyers have not sought placements ahead of the advance, mills and wholesalers fear that they will not buy at all this season. The fir mills hold unfilled orders for 8,163 carloads, 30,000 feet to the car, of fir lumber for eastern building account, but in view of the rate advance which became effective August 26 many cancellations are expected. New orders from the East are practically an offset to the car supply of 30 per cent. of normal. The new freight rates are heavily discriminatory against West Coast fir woods in favor of southern pine, the differential running from 44 cents to $13.37 per 1,000 feet. The mills declare officially that the average cost of producing fir lumber today is $32 per 1,000 feet.

(Special Correspondence to The American Architect)

Chicago, Ill., Aug. 24.—Again official announcement comes that the high cost of material and labor will bring building construction to a standstill within the next sixty days, except for a few theatres, hotels and apartment houses. E. M. Craig, secretary of the Building Construction Employers' Association, sizes the situation up in this manner. He estimates that about $15,000,000 worth of work is now held up by prohibitive costs, which is $50,000,000 above what it was estimated in January it would be at this time.

In the case of building of houses and flats, it is estimated that only about one-tenth the needs is under way. Chicago today stands about 60,000 houses short of its absolute necessity in dwellings. Residents are therefore forced to "double up" in many apartments and houses in order to get a roof over their heads. Inasmuch as prospective home builders see little chance of ever getting back their investment, their plans for building have been shelved. In the meantime rents continue to advance.

The let-down in building activities has removed the labor shortage which some time ago caused some embarrassment among contractors. Plasterers, however, are still hard to get, although carpenters and bricklayers are plentiful. Labor is drifting to Chicago now from Pittsburgh, Detroit and other points where there has been a sag.

Local street car companies report plenty of applications for work and, while employment is not slack, many industries report men applying for jobs.

President Adolph F. Kramer of the Chicago Real Estate Board is active in a plan to reduce the cost of constructing apartment buildings. He has called a conference of leading building material, building labor, real estate and mortgage banking men for the latter part of this week to discuss the apartment and high rent situation, with the hope of arriving at some remedy for relief.

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